

FIG. 1
PRIOR ART

THIS DOCUMENT CONTAINS INFORMATION THAT MAY BE PATENTABLE

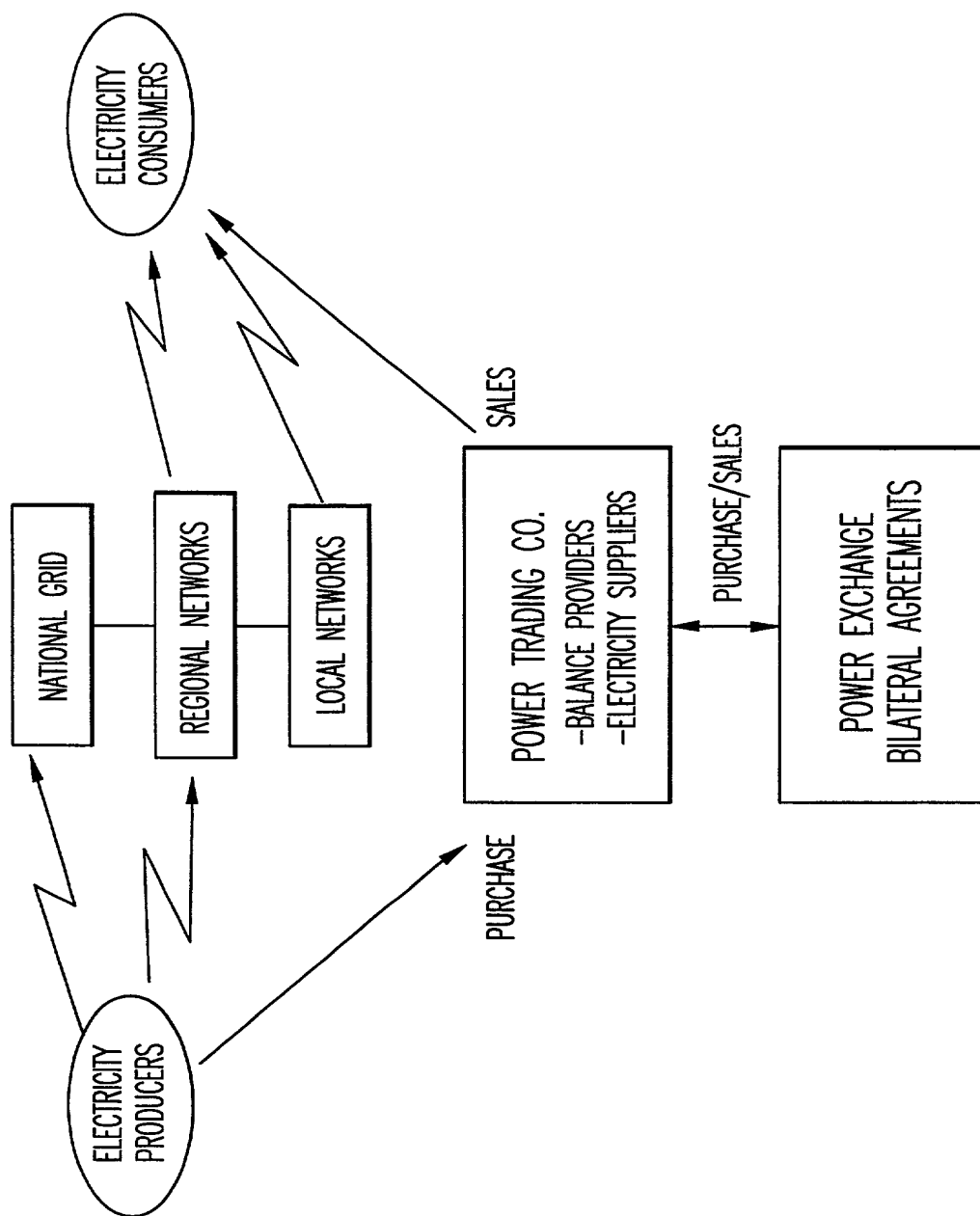


FIG. 2

FIG. 2 is a block diagram of a power system architecture.

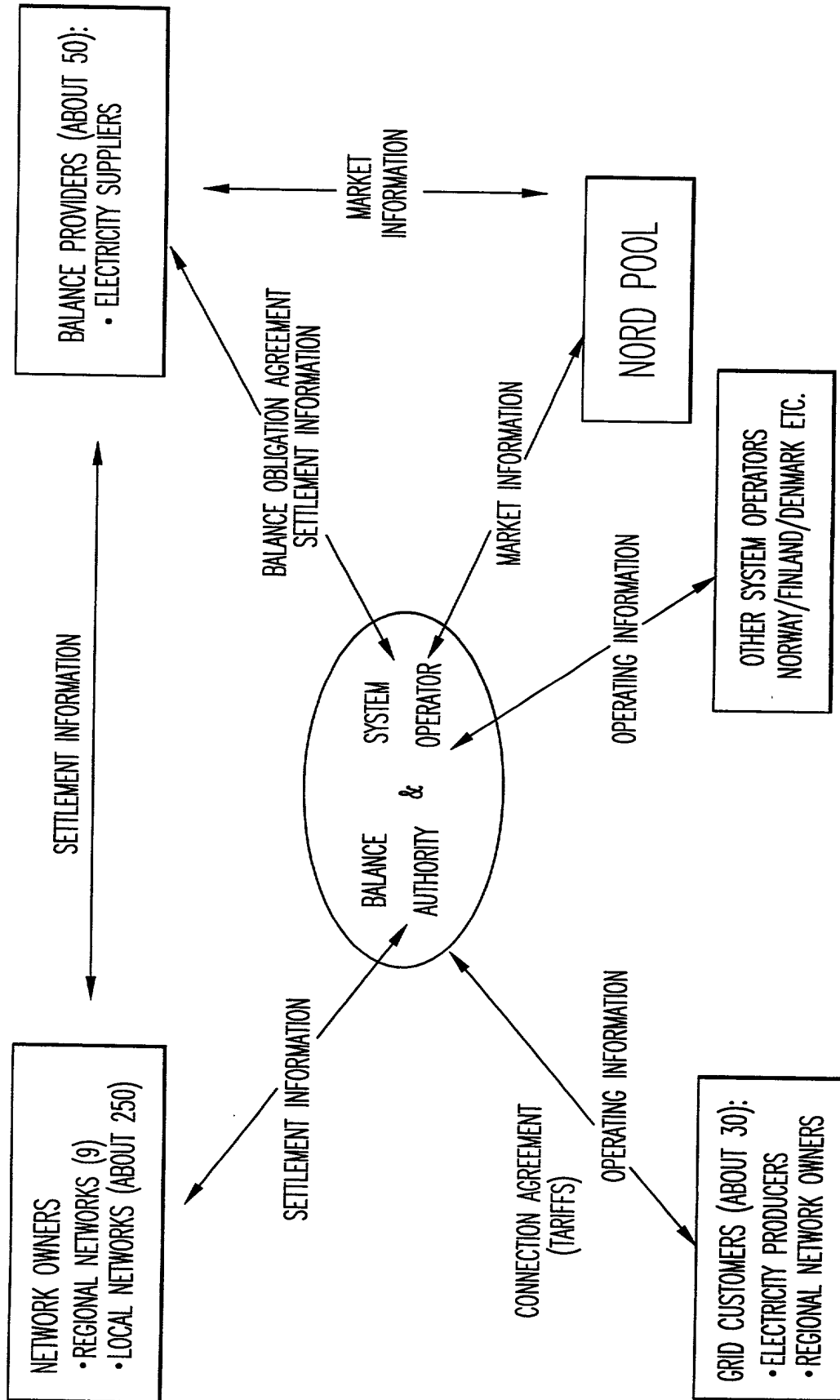


FIG. 3

FIG. 3 is a block diagram of the system architecture.

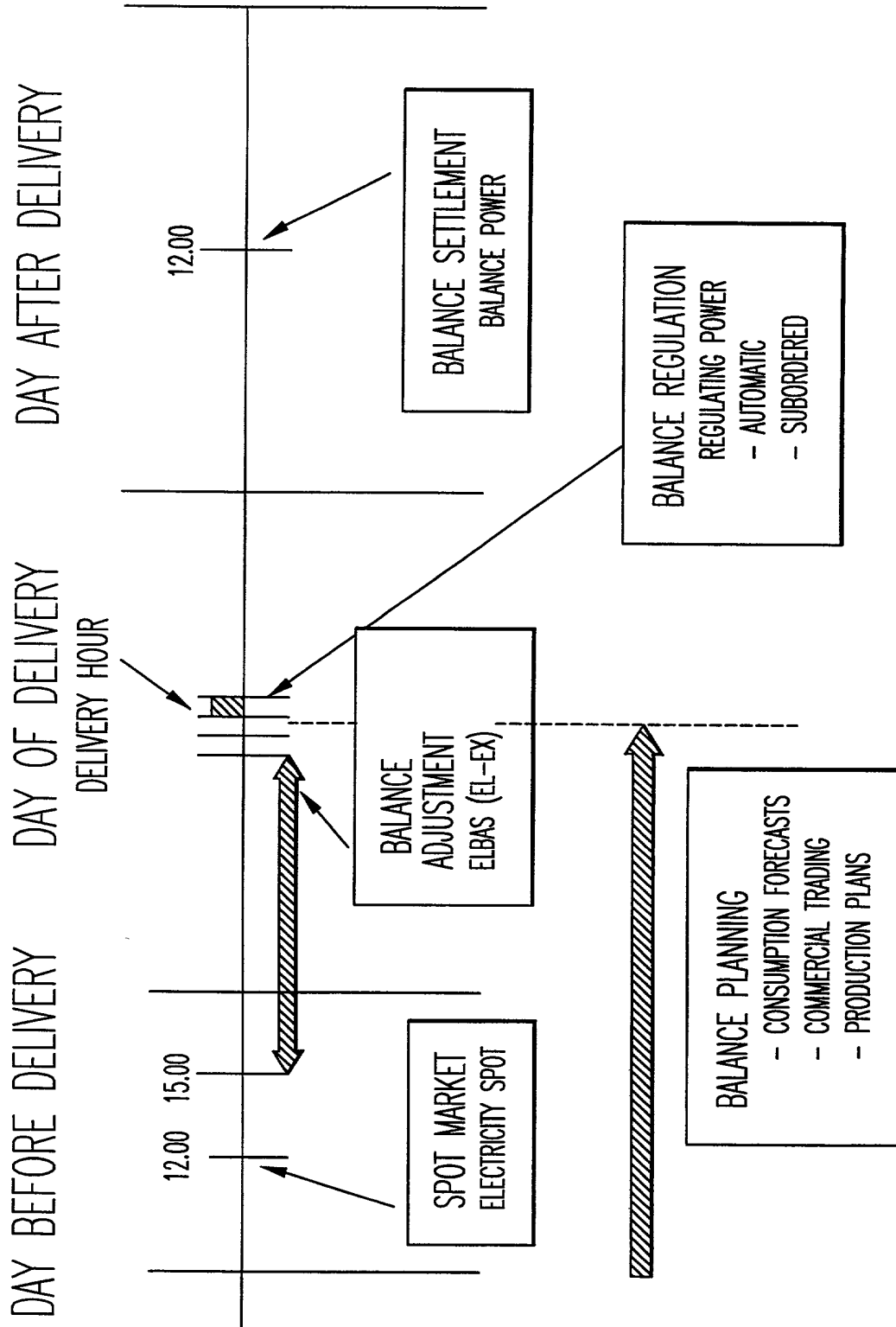


FIG. 4

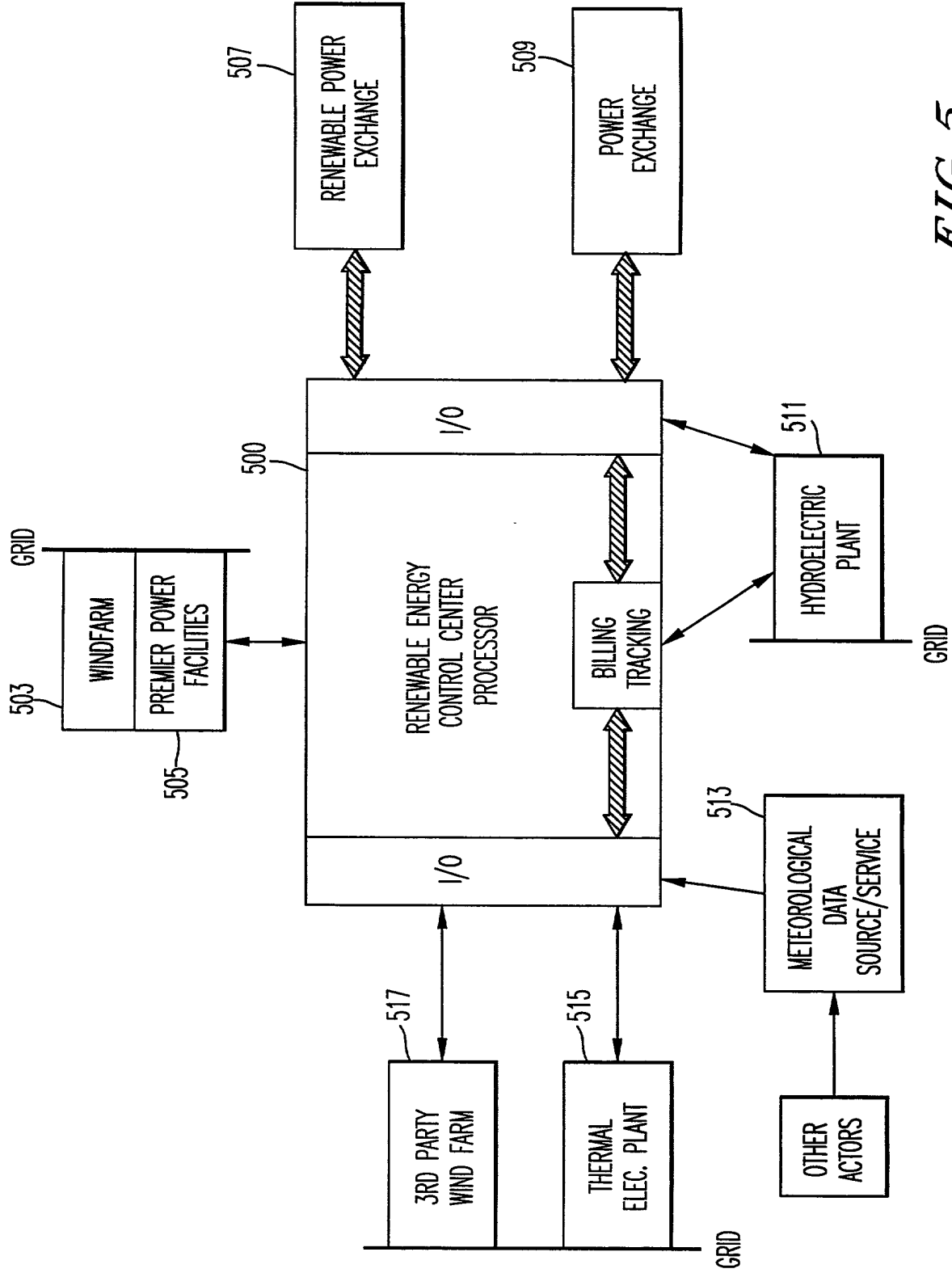


FIG. 5

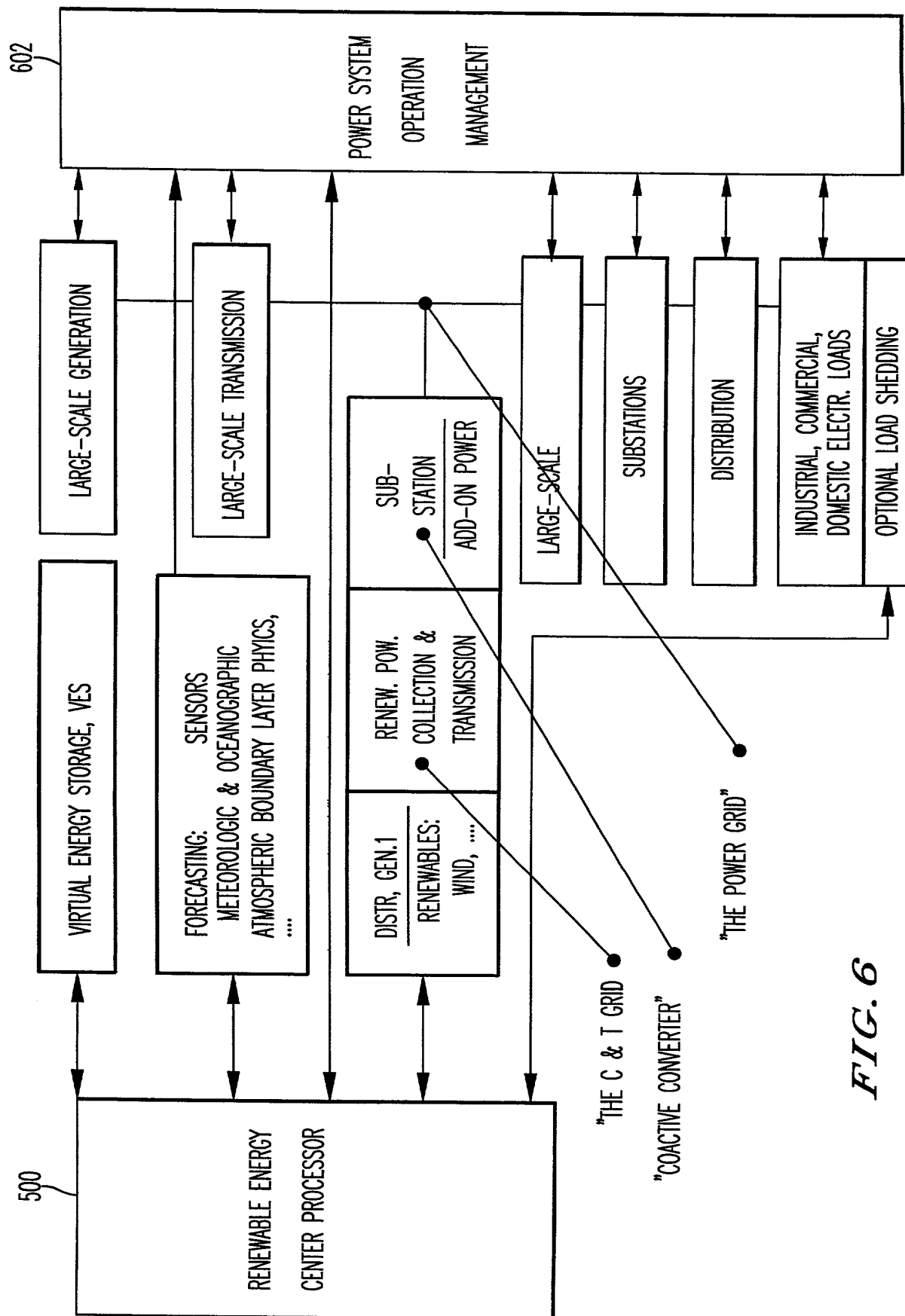


FIG. 6

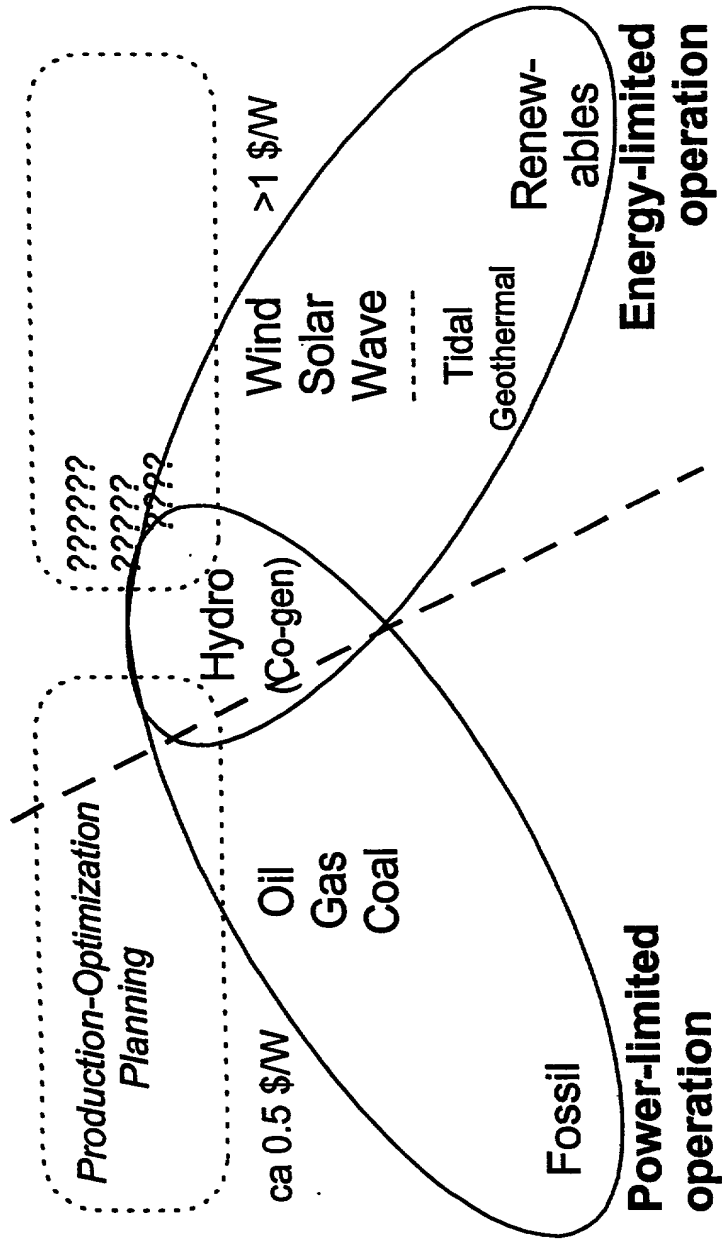


FIG. 7

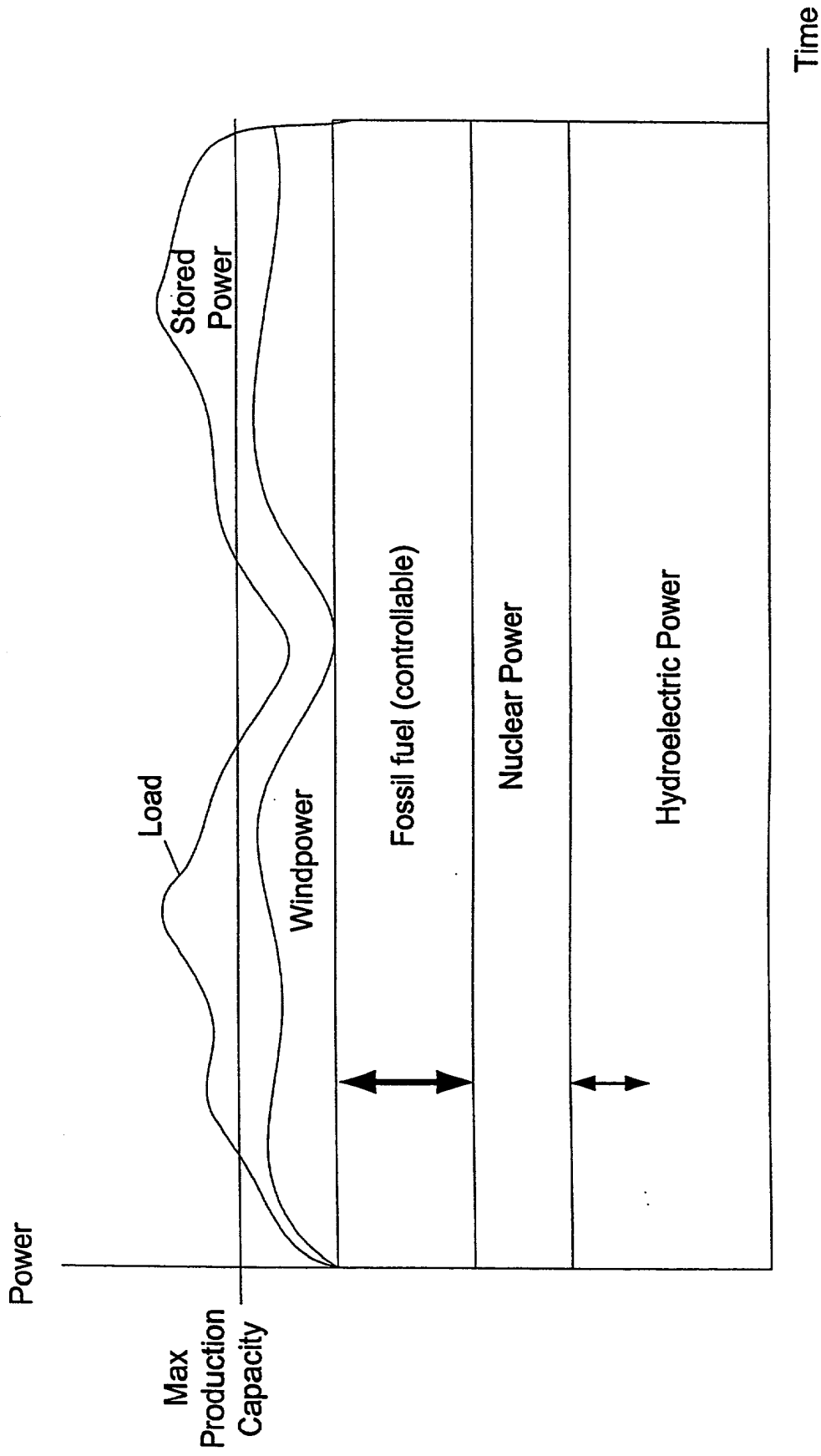


FIG. 8

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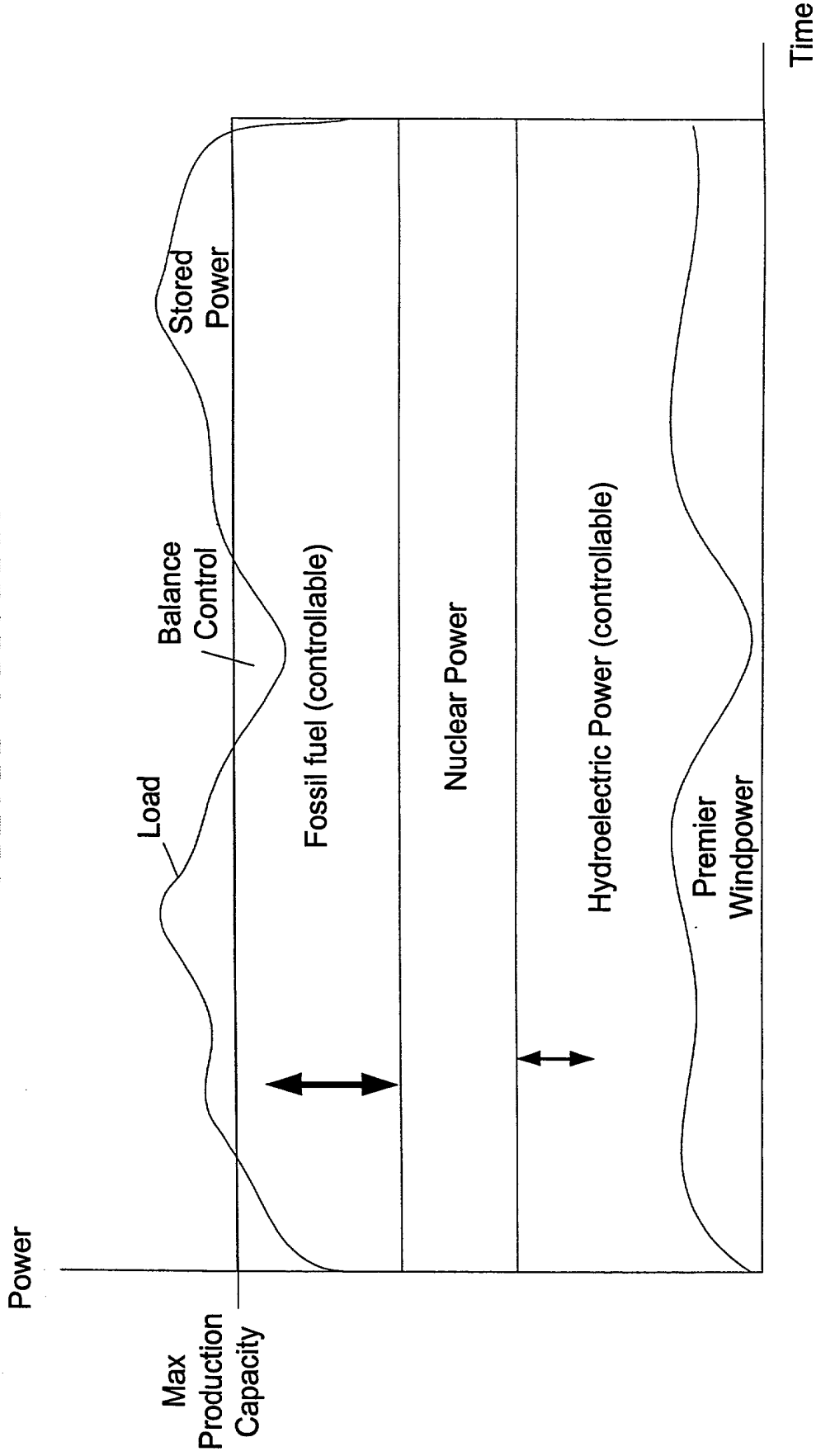


FIG. 9

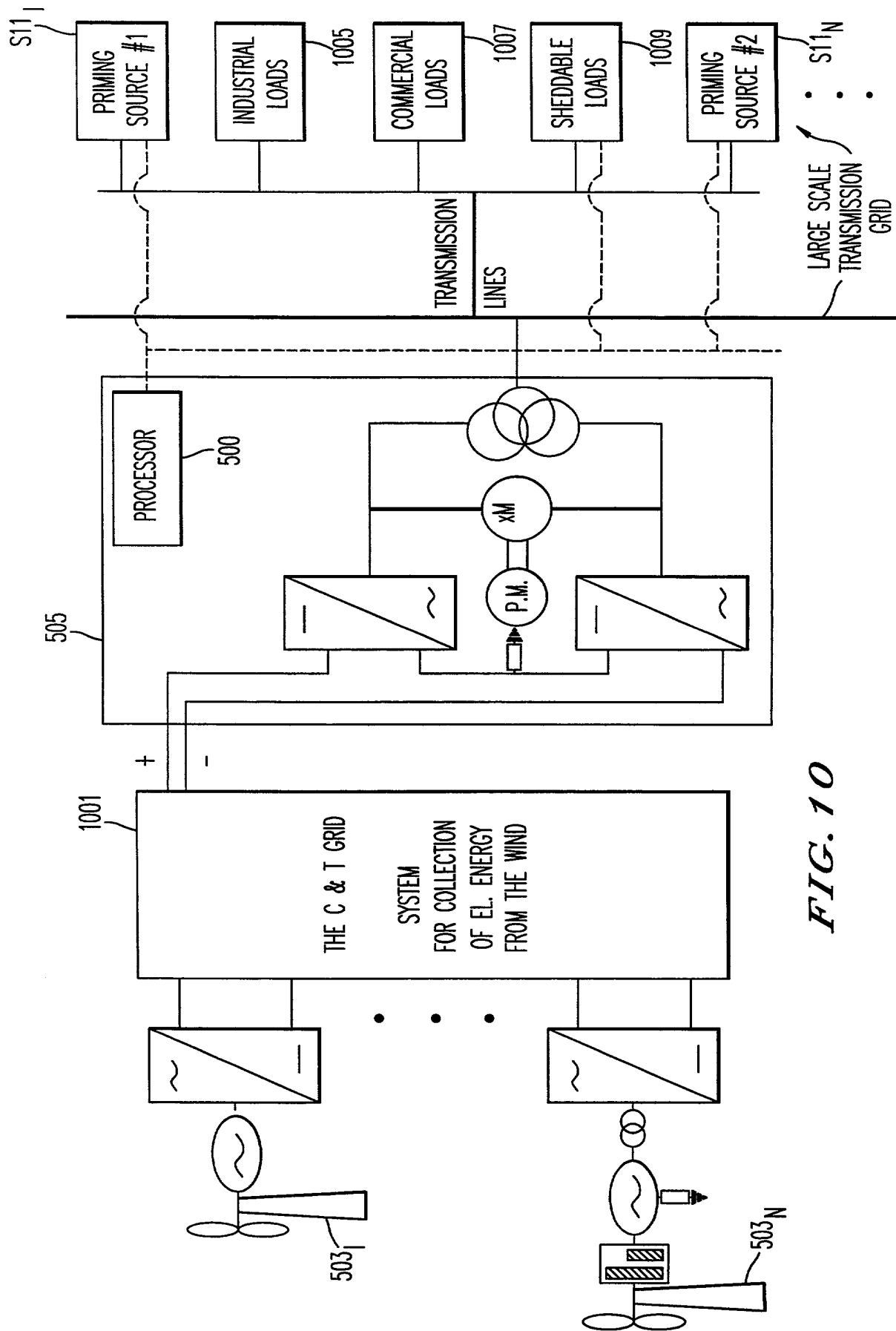
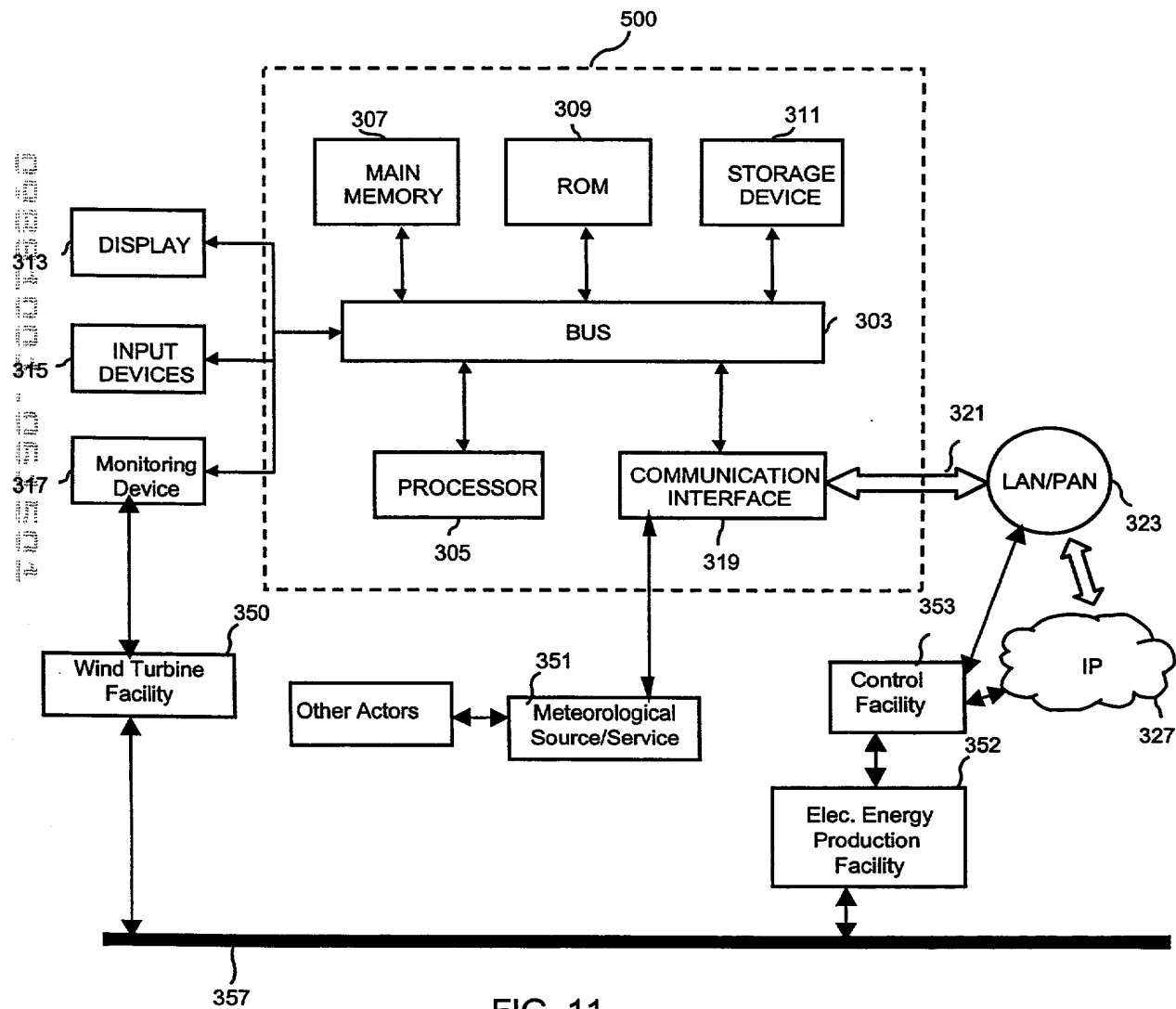


FIG. 10

FIG. 10 is a block diagram of a power system for wind energy collection and distribution.



Wind Turbine ID	Quantity of Produced Power	Time Period	Statistical Indicator
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FIG. 12

Power Unit ID	Quantity of Produced Power	Time Period	Offer Price
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FIG. 13

Power Unit ID	Quantity of Produced Power	Time Period	Bid Price
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FIG. 14

Guaranteed Power Unit ID	Quantity of Produced Power	Time Period	Price
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FIG. 15

Guaranteed Power Unit ID	Quantity of Delivered Power	Confirmation of Delivery
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FIG. 16

Amount by which output voltage is below threshold	Corresponding tap setting on voltage compensation mechanism
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FIG. 17

Wind Turbine ID	Quantity of Produced Power	Time Period
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FIG. 18

FIG. 19 is a block diagram of a power system architecture. The diagram shows a central 'RENEWABLE ENERGY CONTROL CENTER PROCESSOR' (500) and a 'SCALABLE PROCESSOR' (1905) connected to various components. The 'RENEWABLE ENERGY CONTROL CENTER PROCESSOR' (500) is connected to 'VIRTUAL ENERGY STORAGE, VES', 'FORECASTING: SENSORS METEOROLOGIC AND OCEANOGRAPHIC ATMOSPHERIC BOUNDARY LAYER PHYSICS, ...', 'DISTR. GEN.1 RENEWABLES: WIND, ...', and 'SUB-STATION ADD-ON POWER'. The 'SCALABLE PROCESSOR' (1905) is connected to 'DISTRIBUTED GEN.2 CO-GEN', 'DISTRIBUTED GEN.3 MICROTURBINES RENEWABLE: SOLAR WIND', and 'DISTRIBUTED GEN.4 IND. (CO-GEN)'. Both processors are connected to 'POWER SYSTEM OPERATION MANAGEMENT' (1901) and 'LARGE-SCALE GENERATION', 'LARGE-SCALE TRANSMISSION', 'SUBSTATIONS', 'DISTRIBUTION', 'INDUSTRIAL, COMMERCIAL, DOMESTIC ELECTR. LOADS', and 'OPTIONAL LOAD SHEDDING'. A 'METEOROLOGIC SOURCE/SERVICE' (1903) is connected to the 'SCALABLE PROCESSOR' (1905).

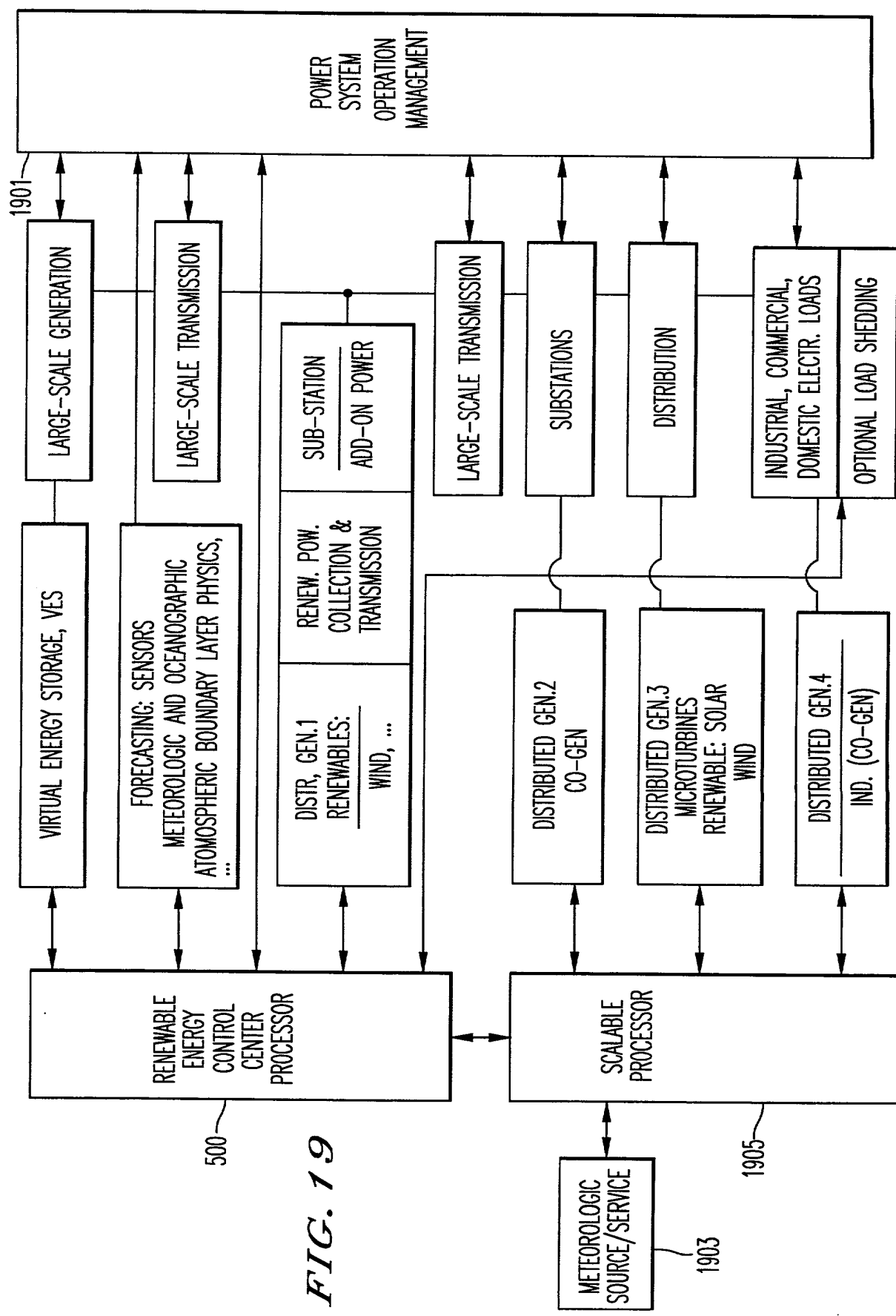


FIG. 19

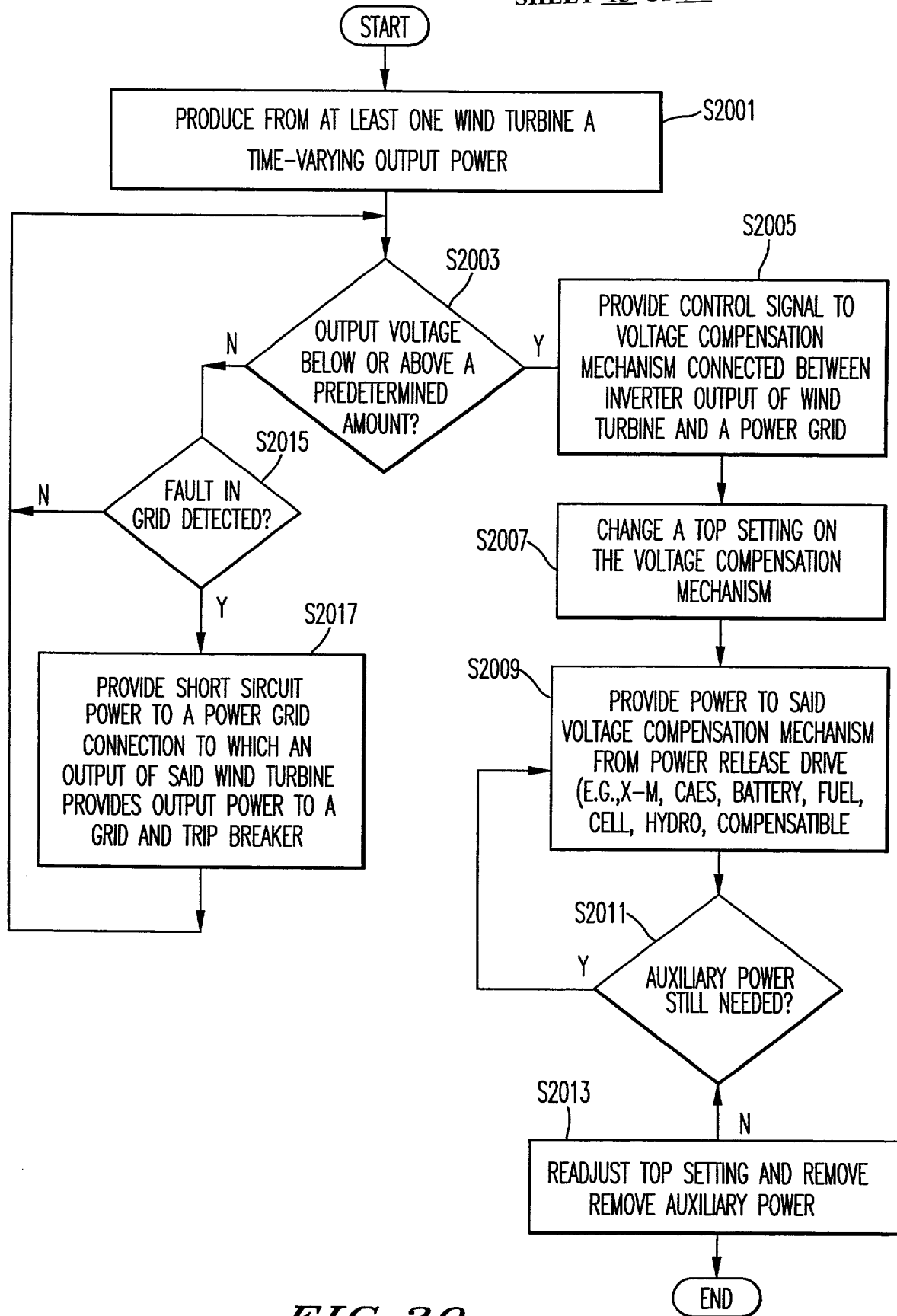
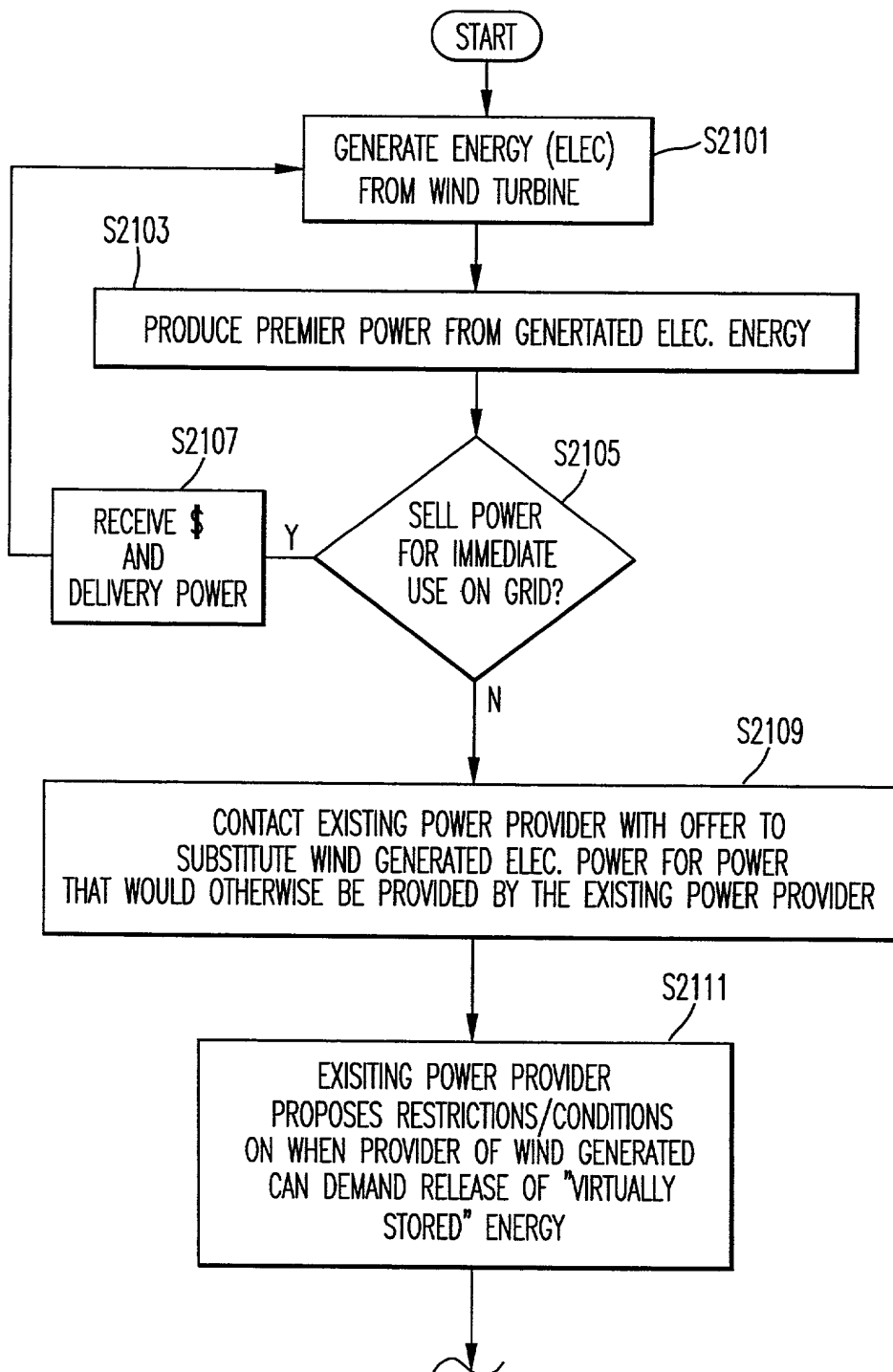


FIG. 20



CONTINUED TO FIG. 21A

FIG. 21A

CONTINUED FROM FIG.21A

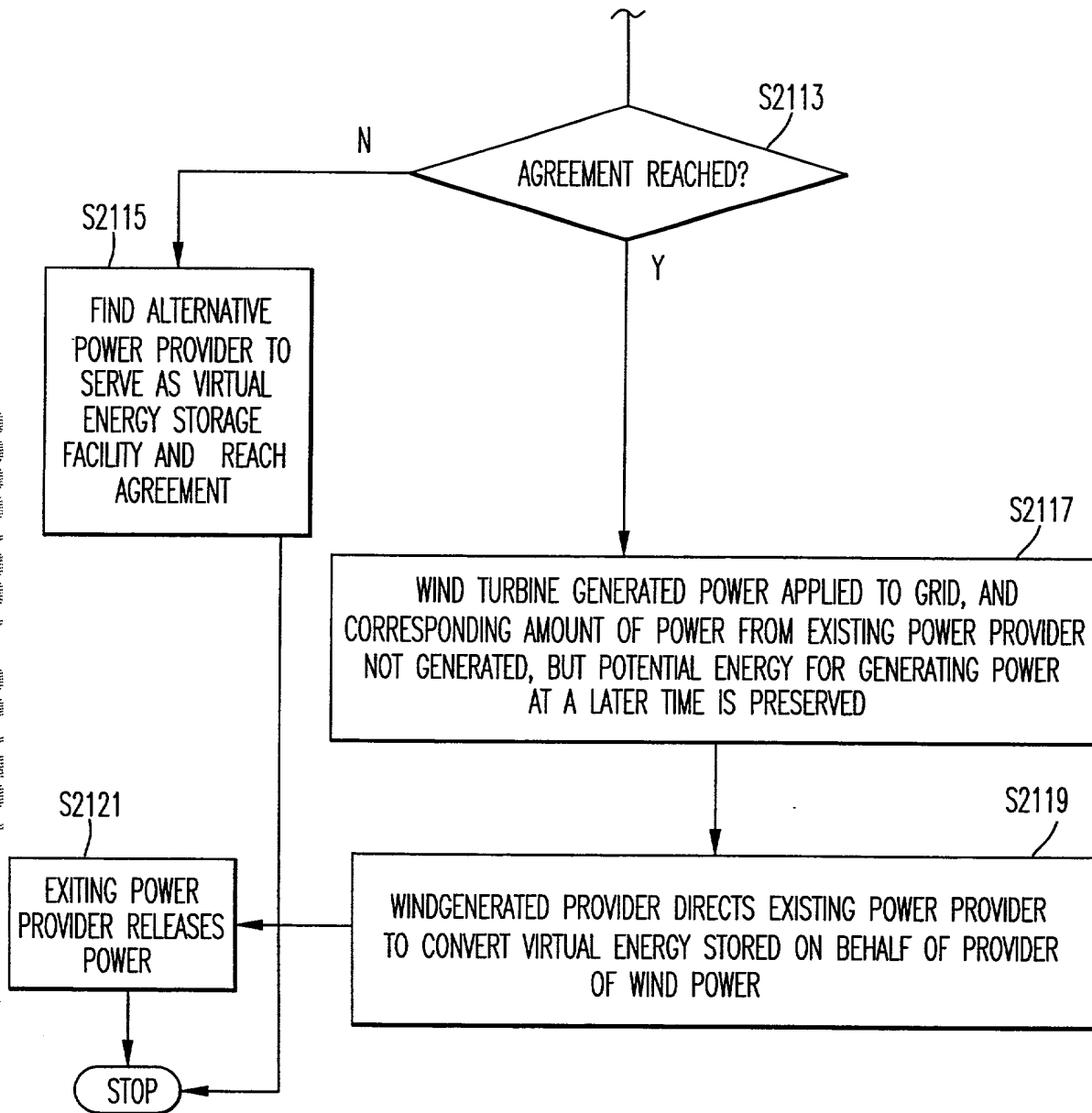


FIG. 21B

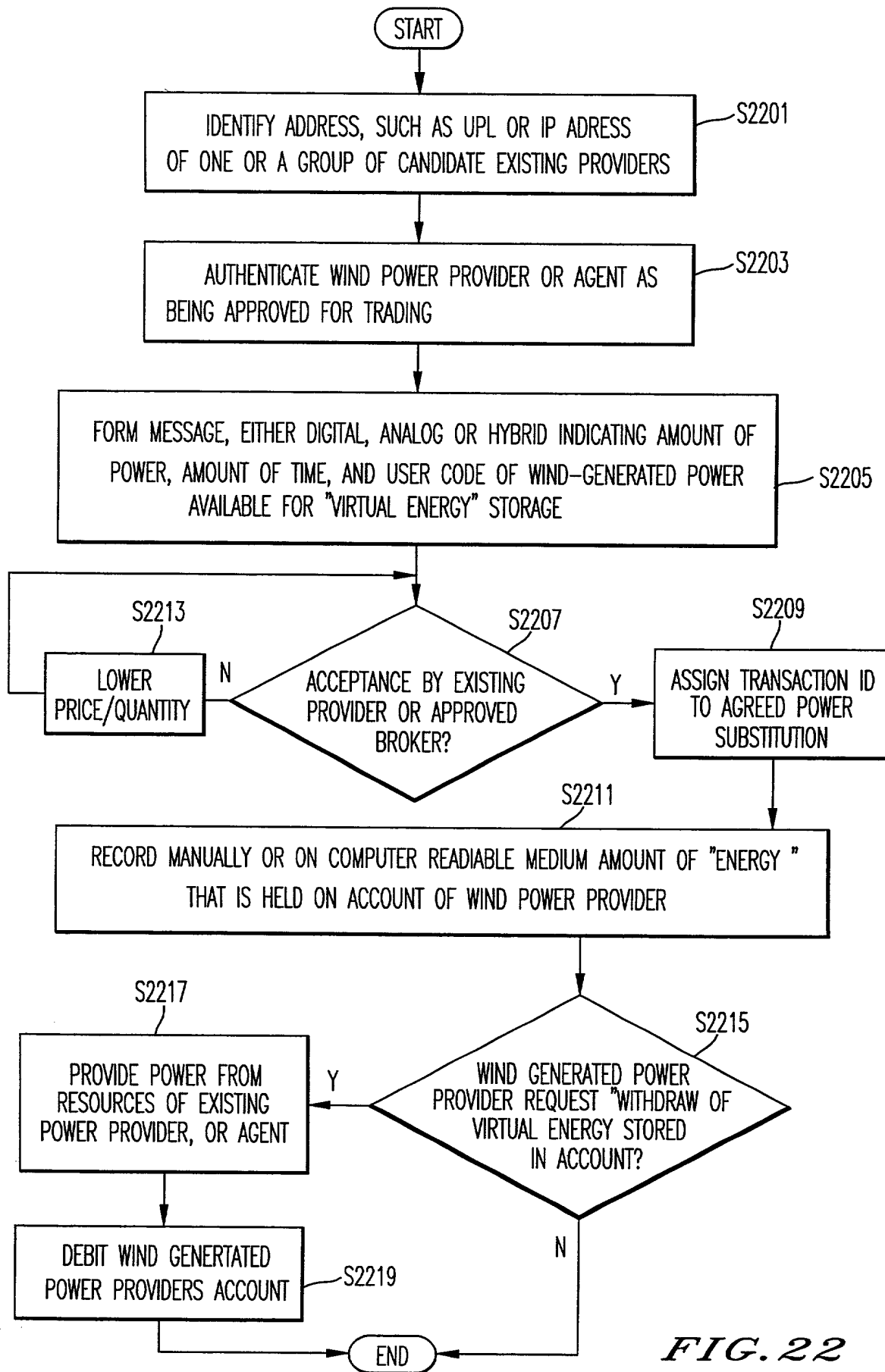


FIG. 22

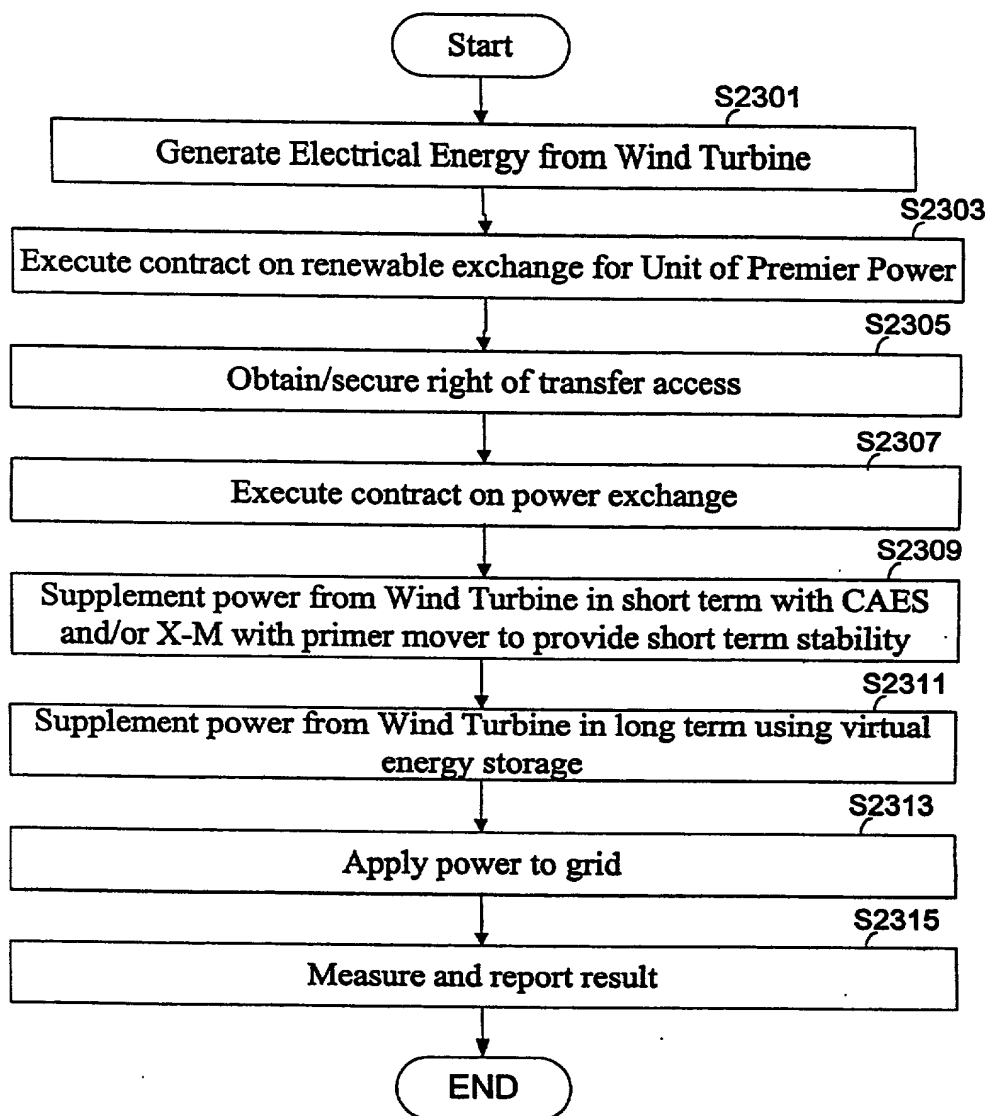


FIG. 23

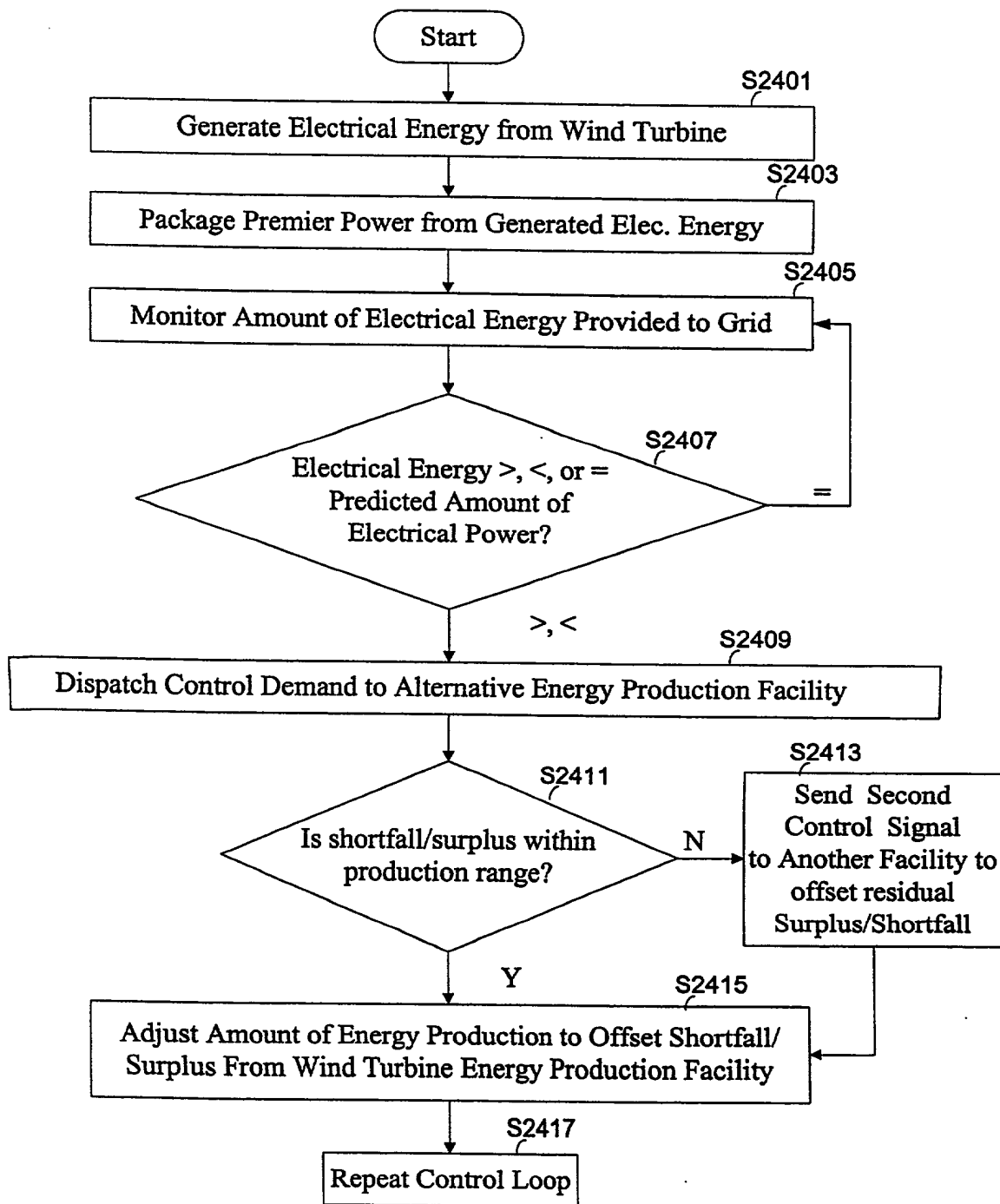


FIG. 24

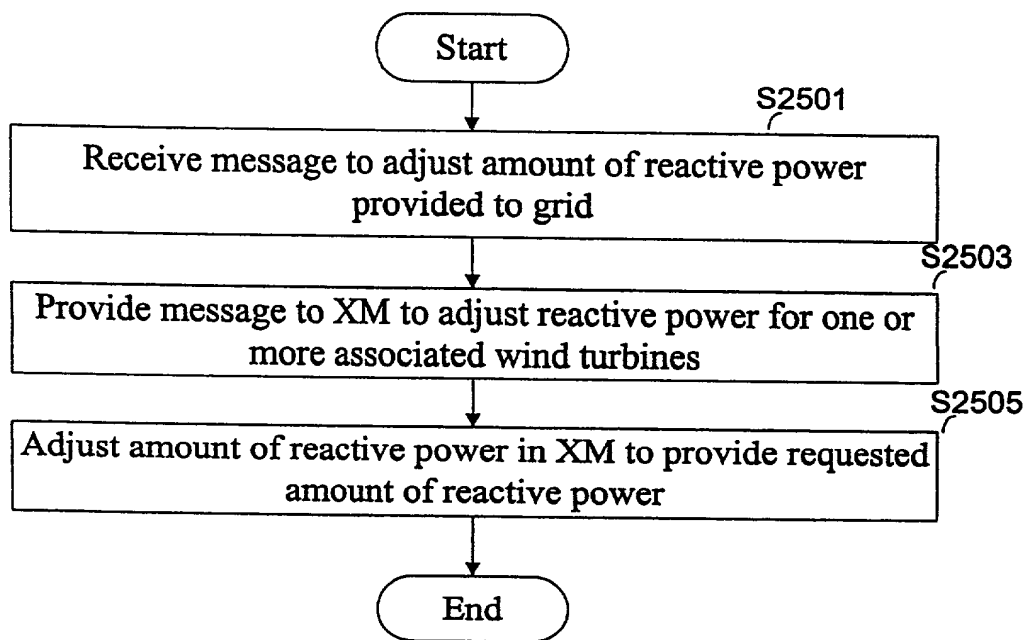
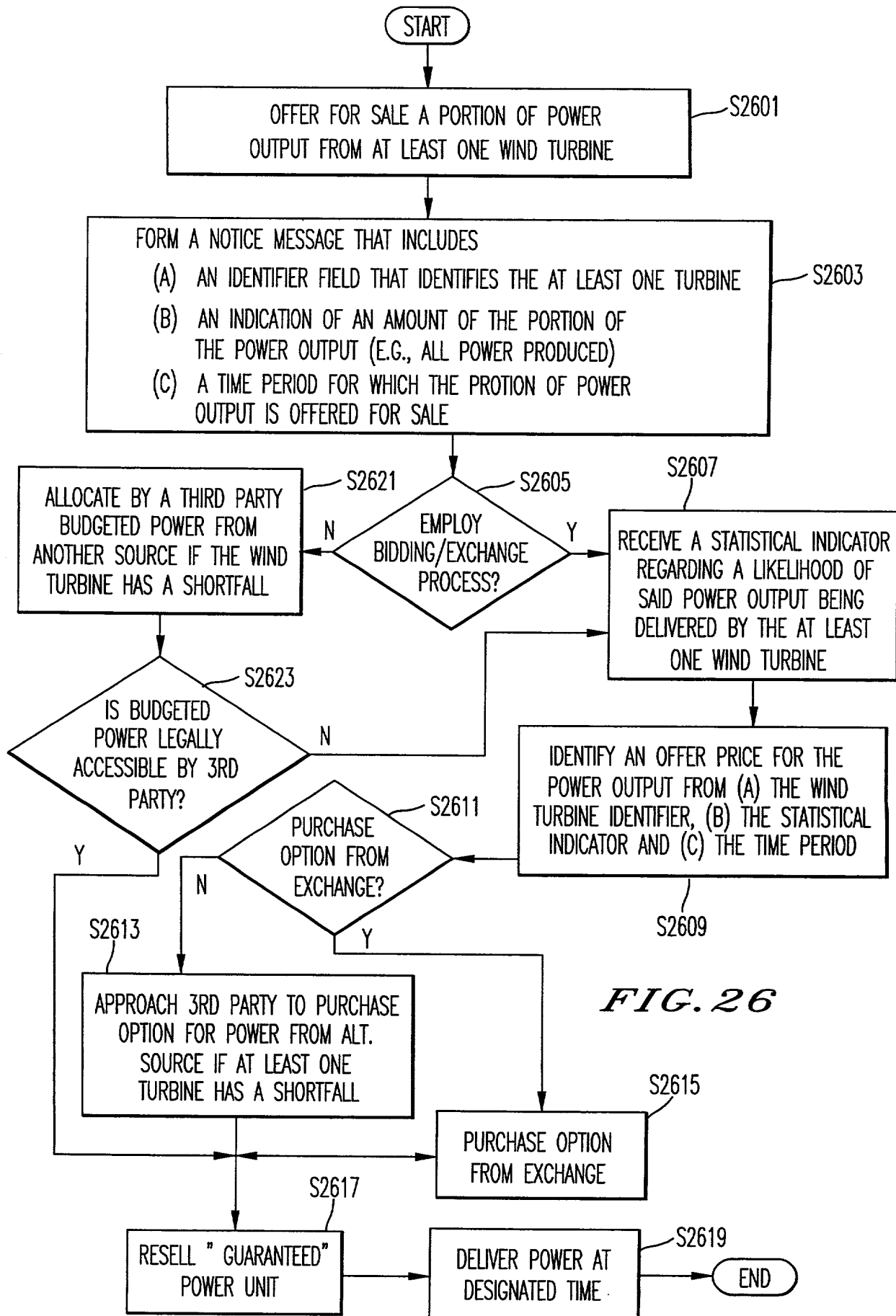


FIG. 25



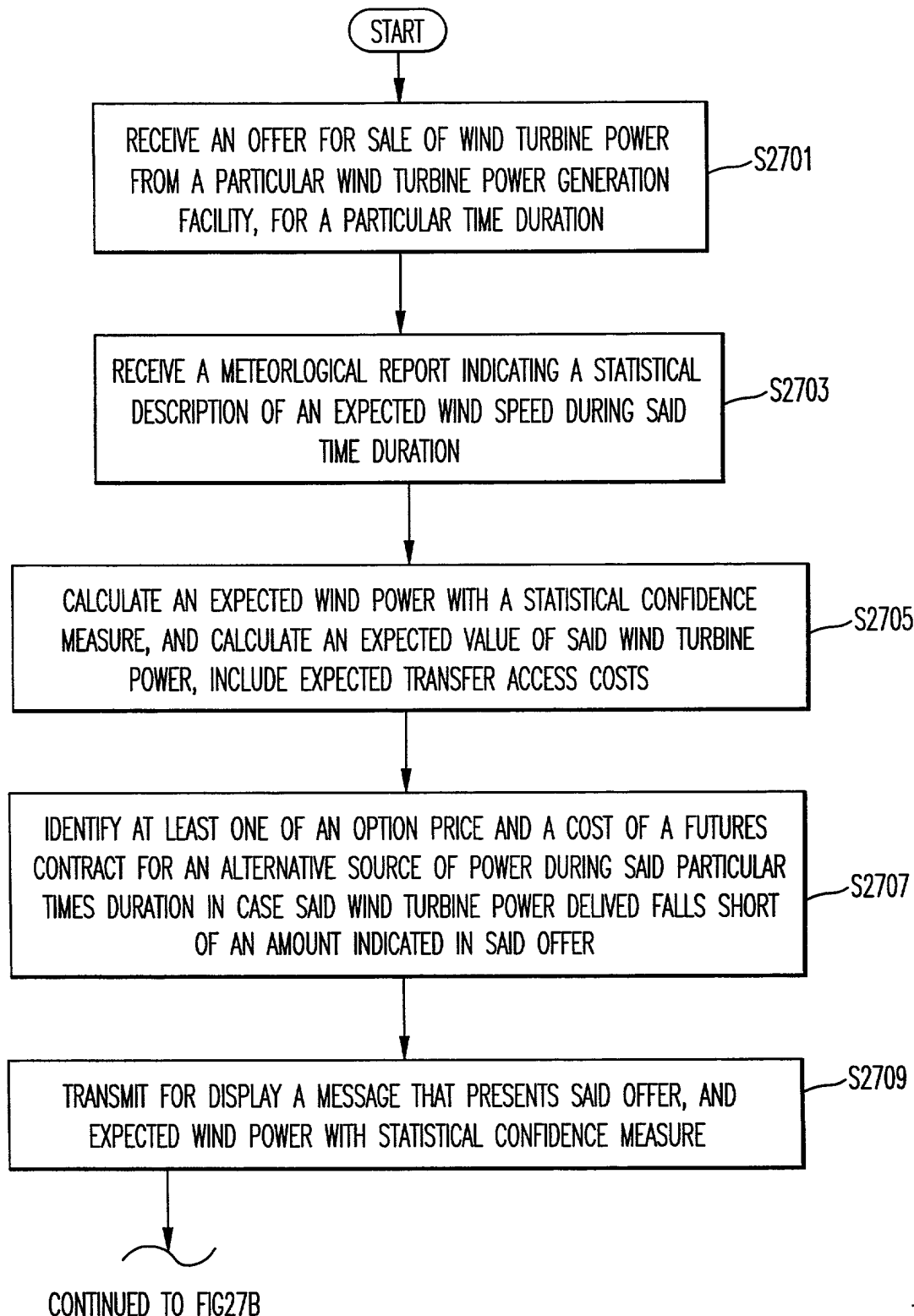


FIG. 27A

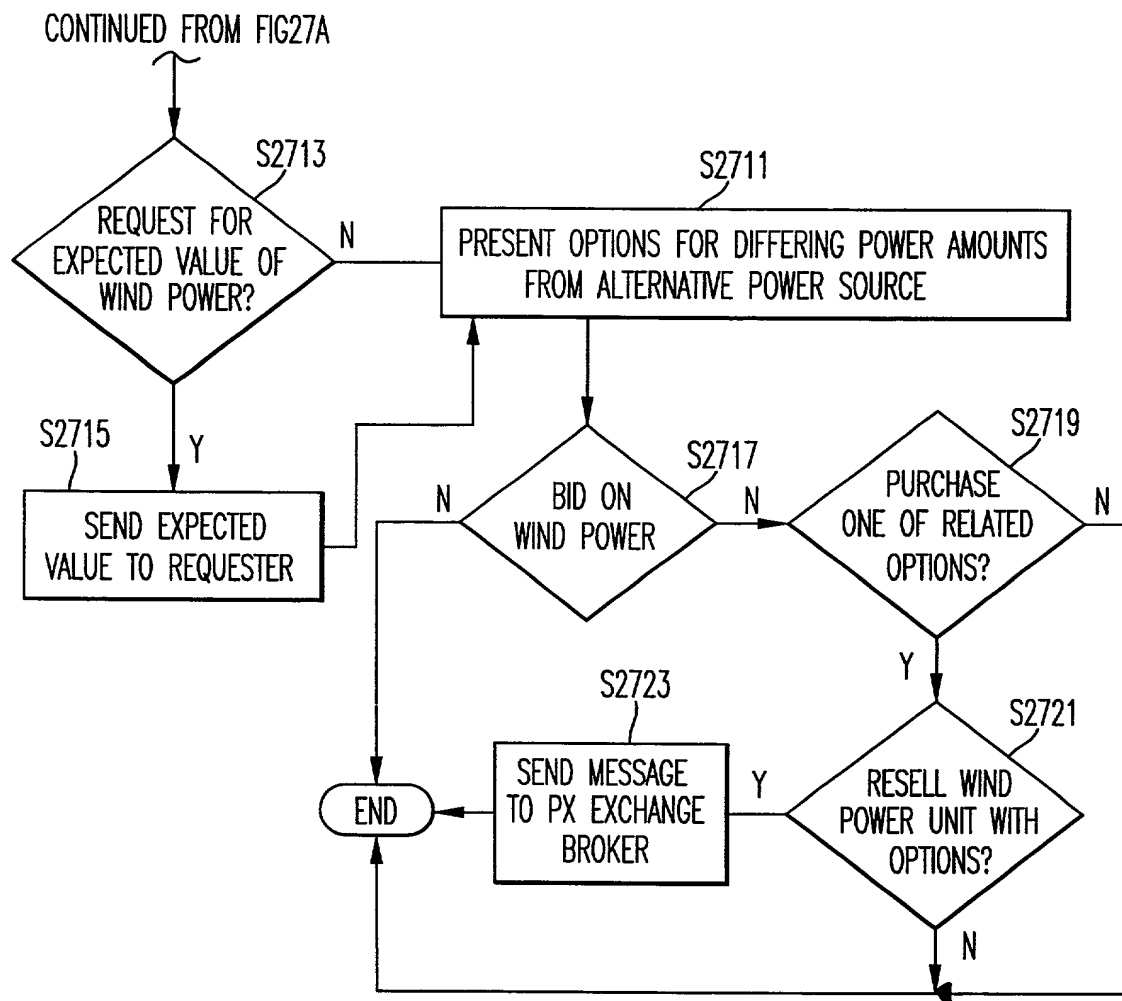
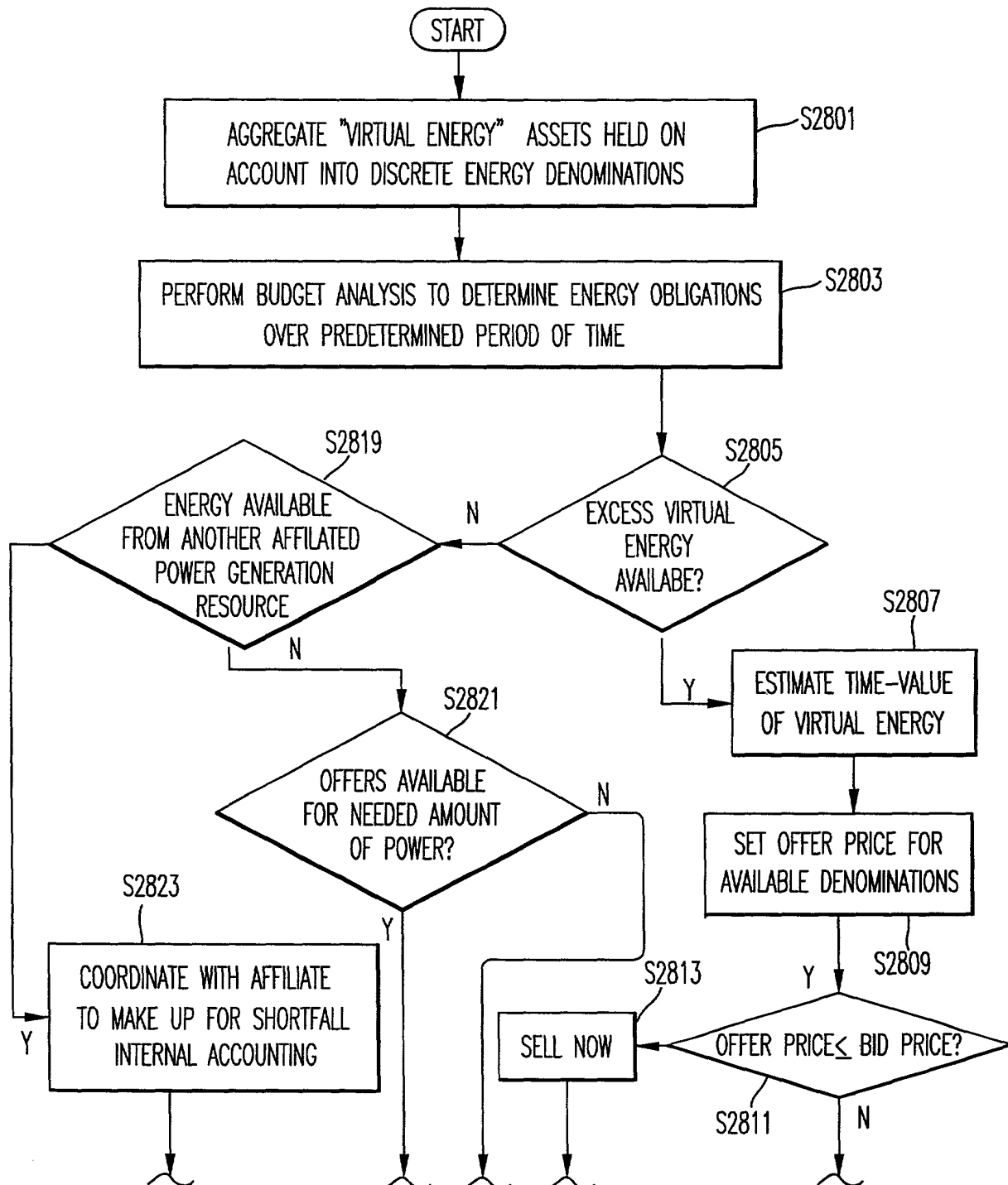


FIG. 27B



CONTINUED TO FIG28B

FIG. 28A

CONTINUED FROM 28A

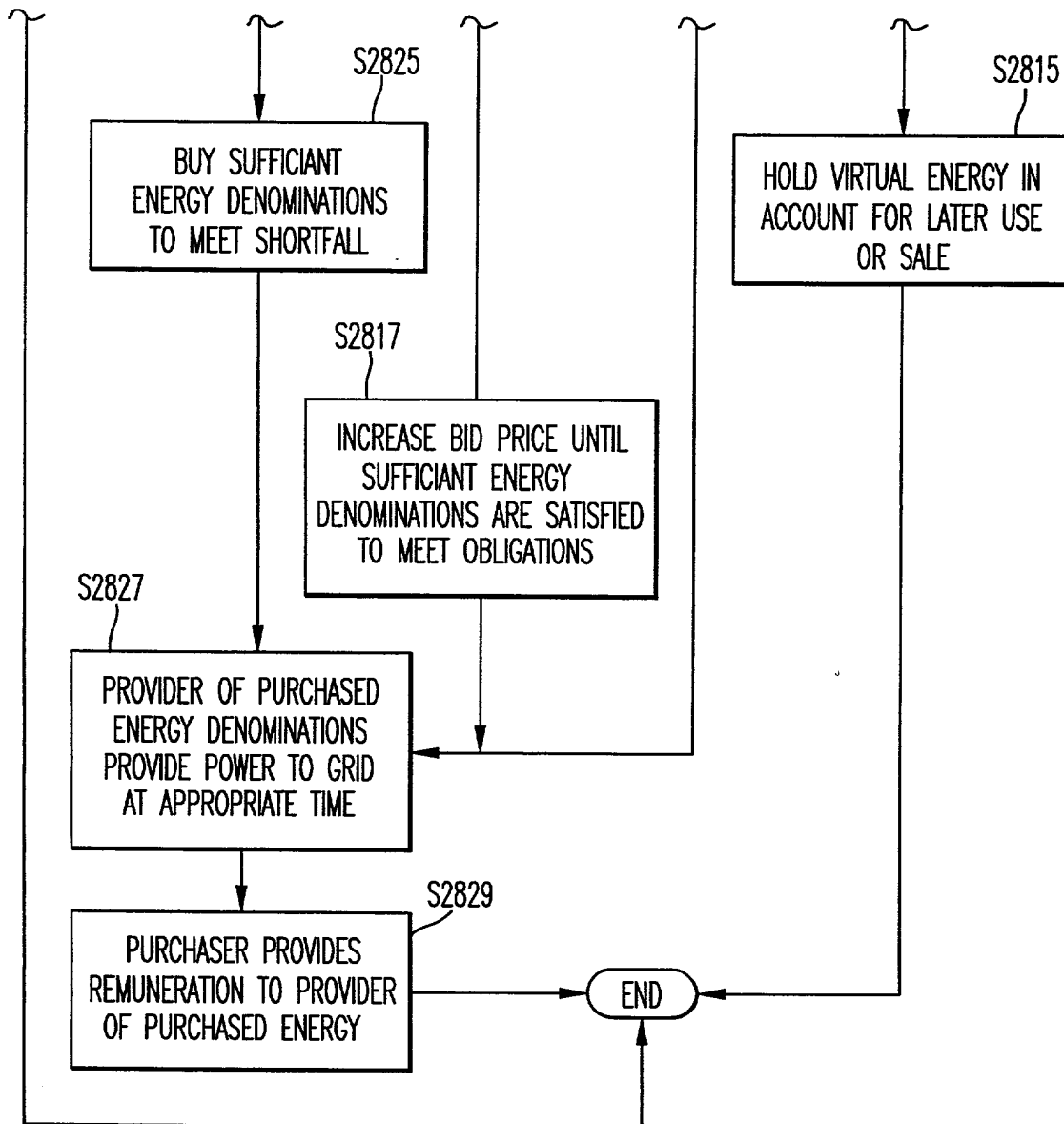


FIG. 28B

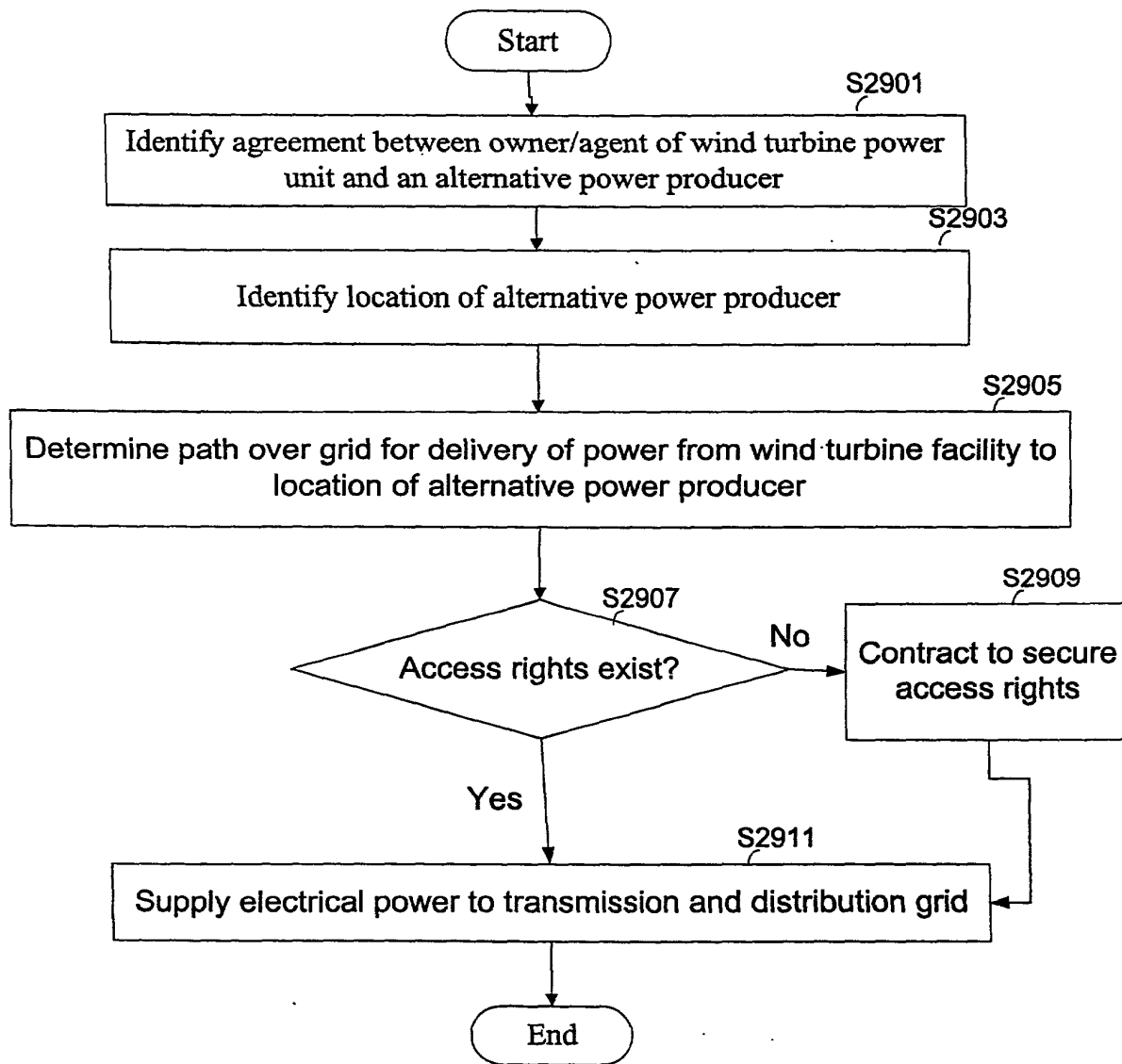


FIG. 29

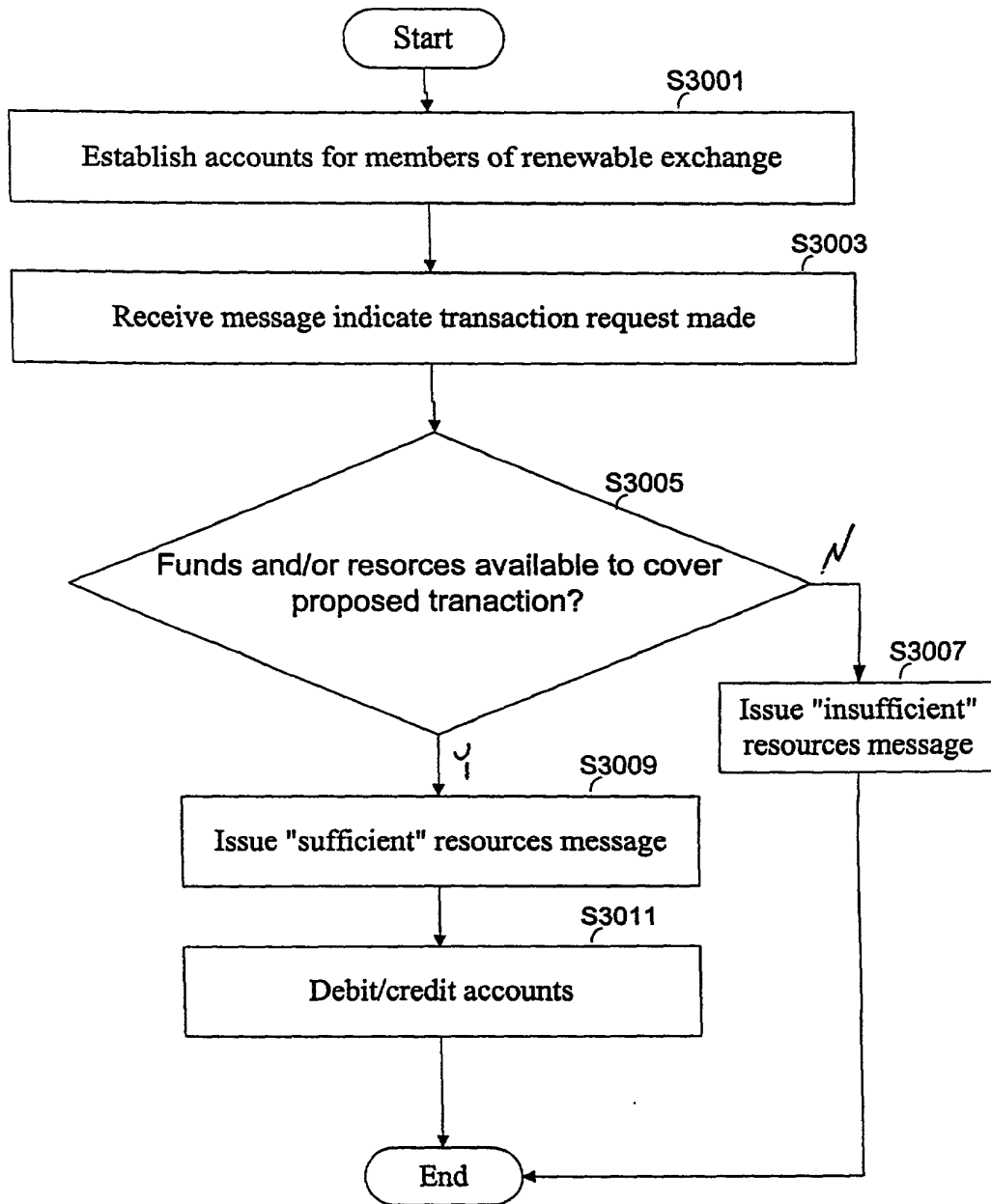


FIG. 30

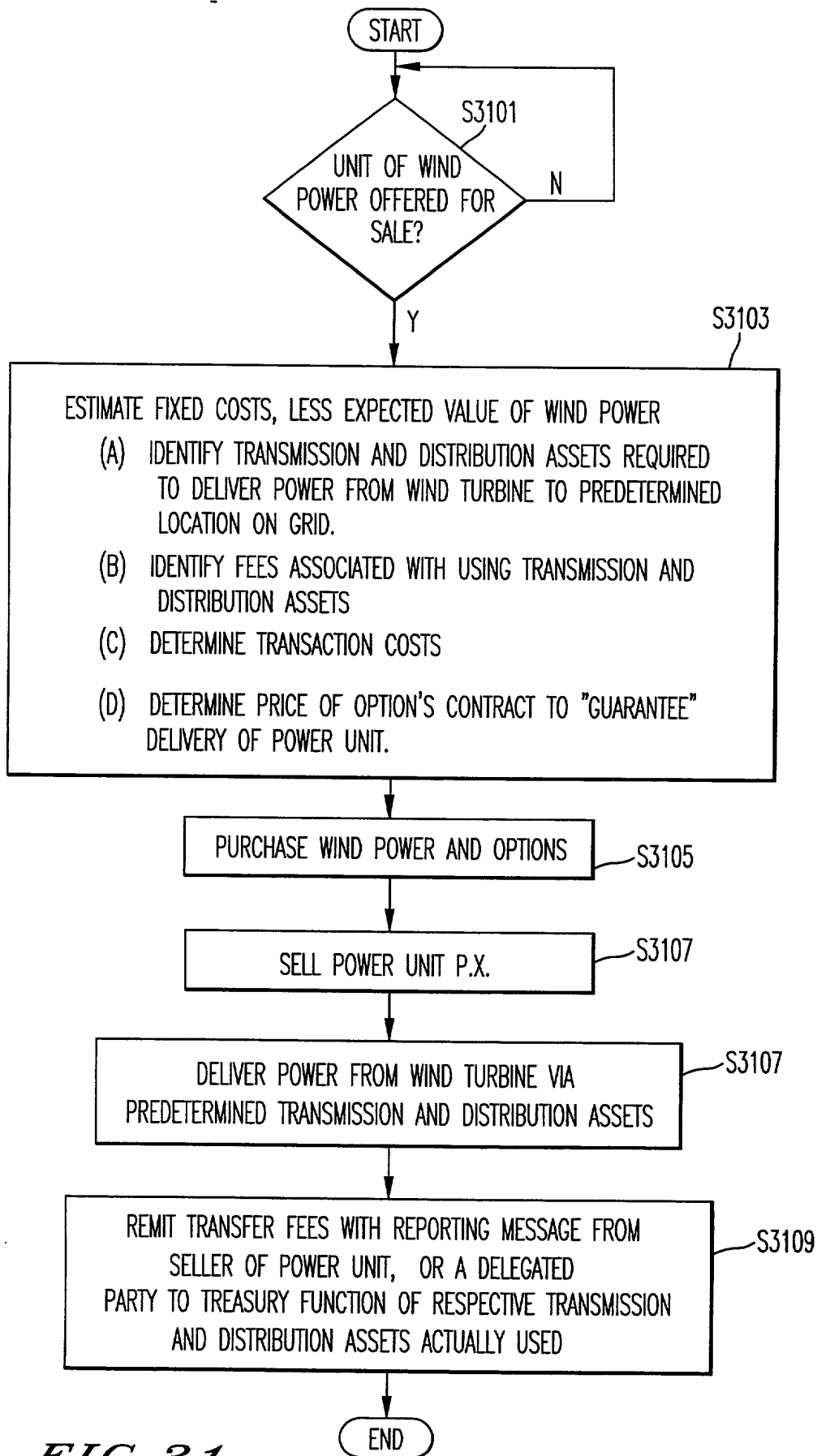


FIG. 31

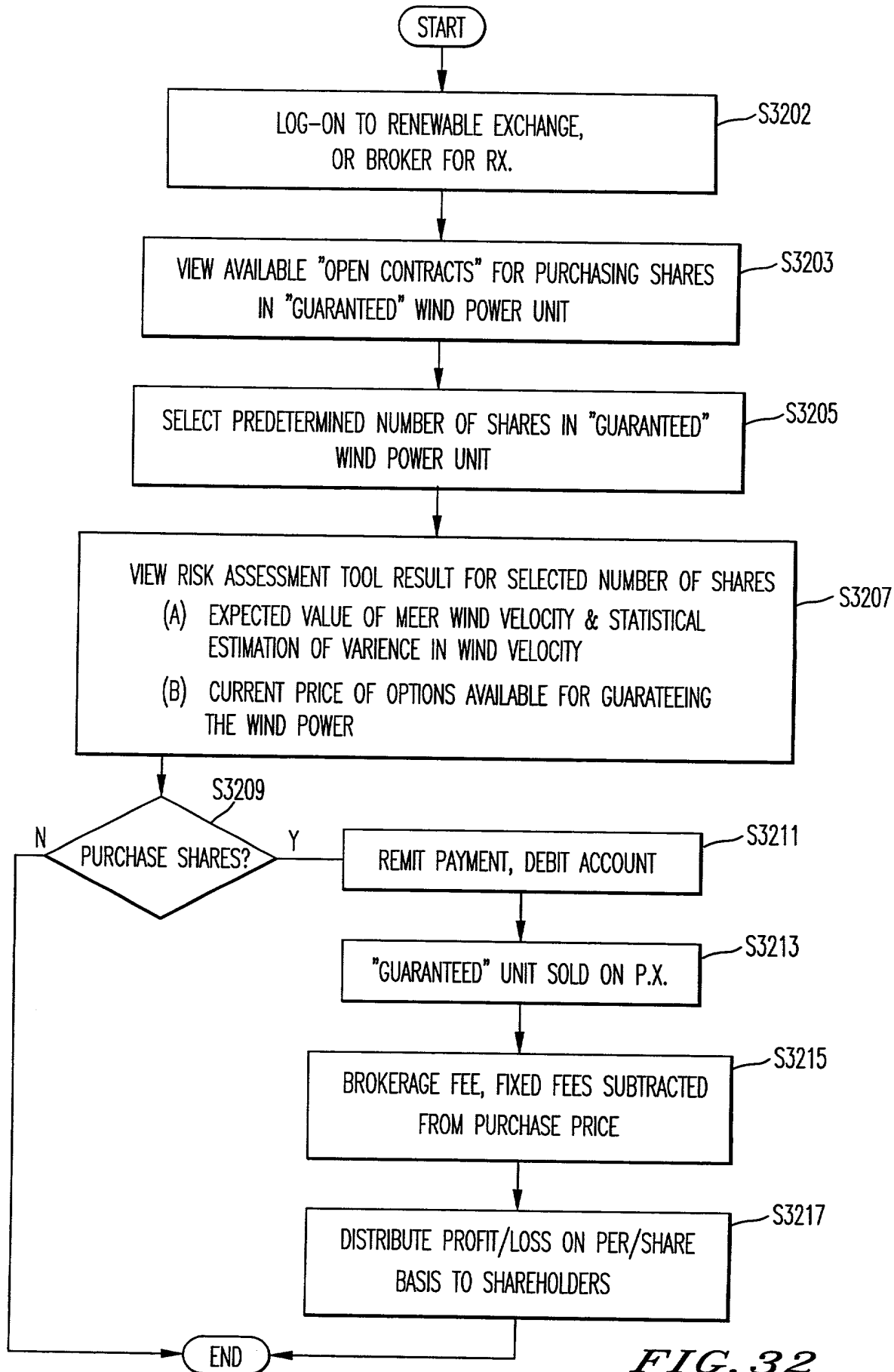


FIG. 32

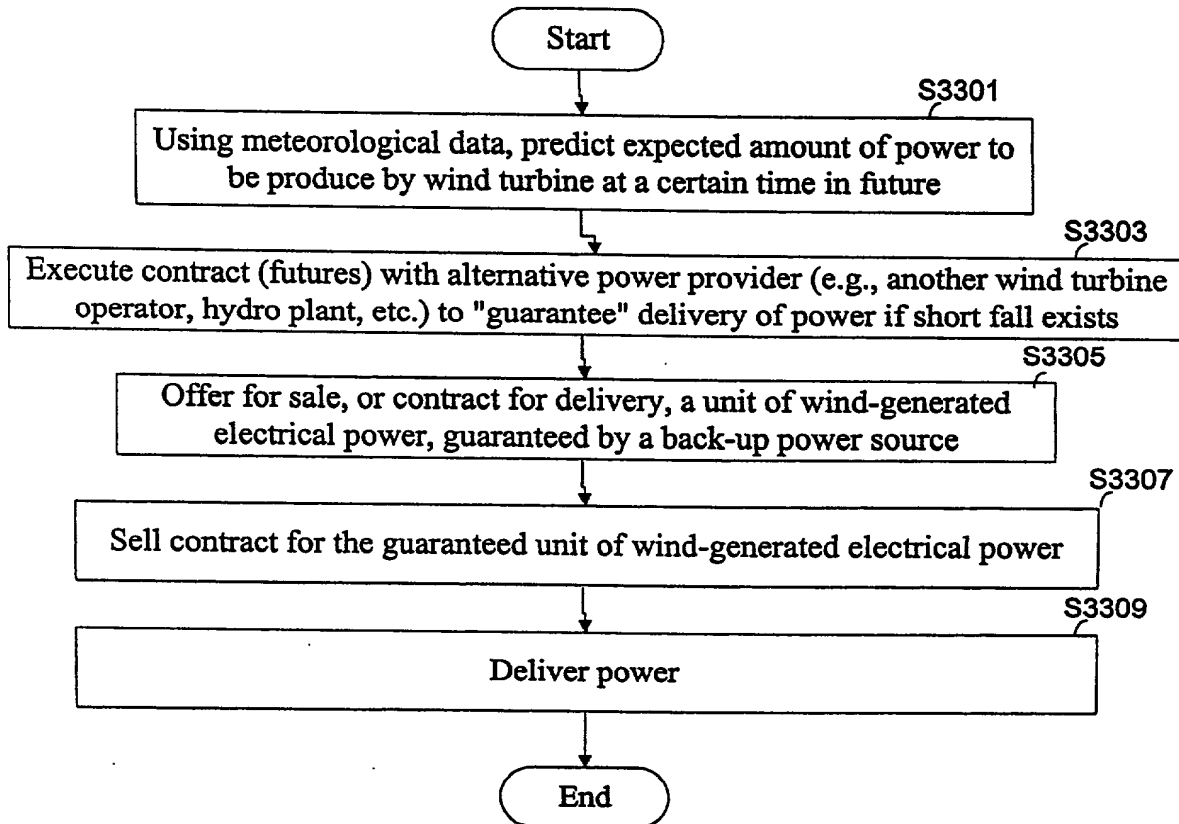


FIG. 33

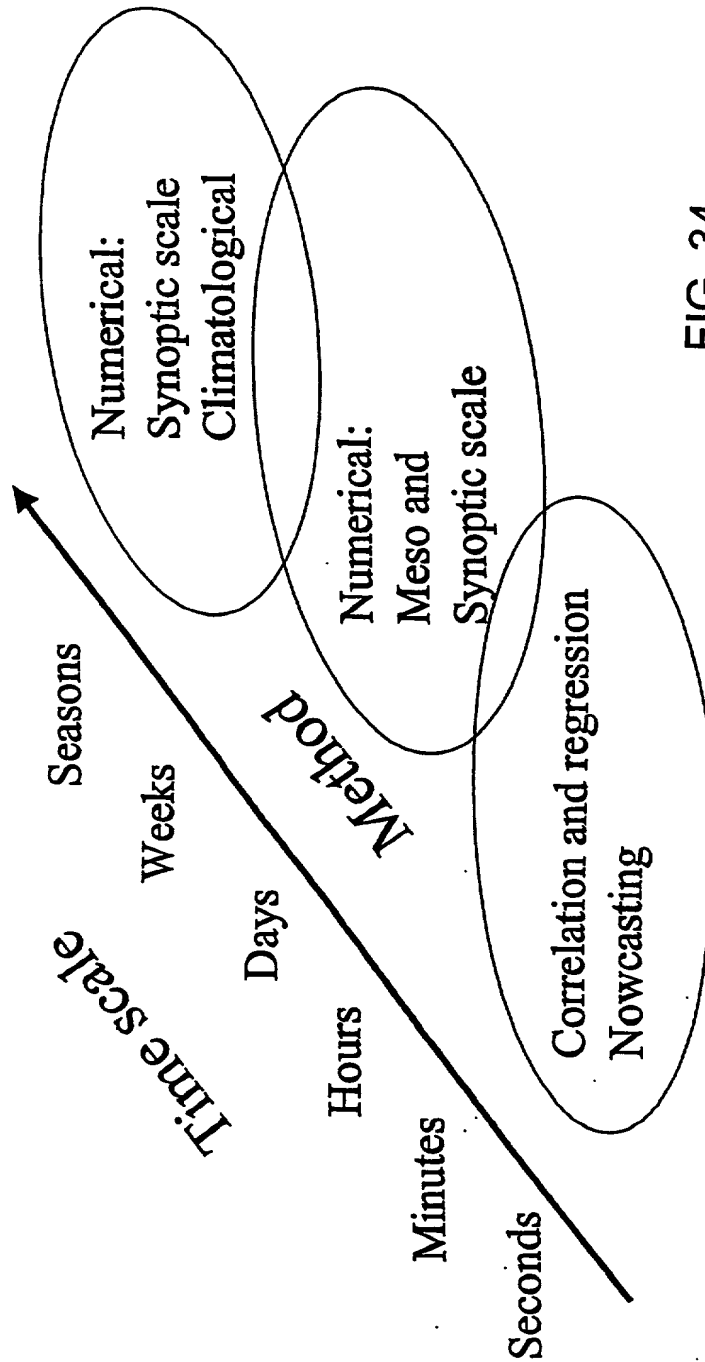


FIG. 34

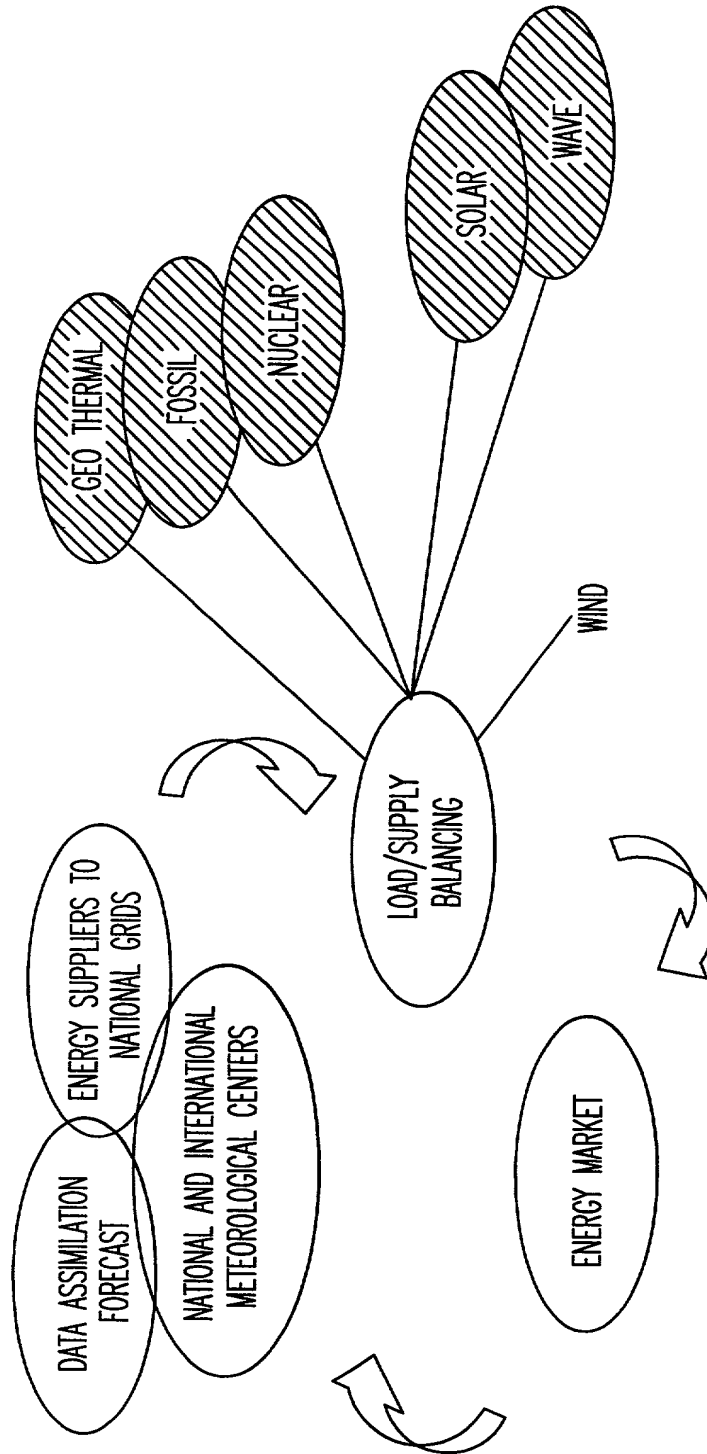


FIG. 35

FIG. 36 is a block diagram of a system for providing weather forecasts to wind farm operators, independent renewable energy forecast consultants, and the national meteorological center output.

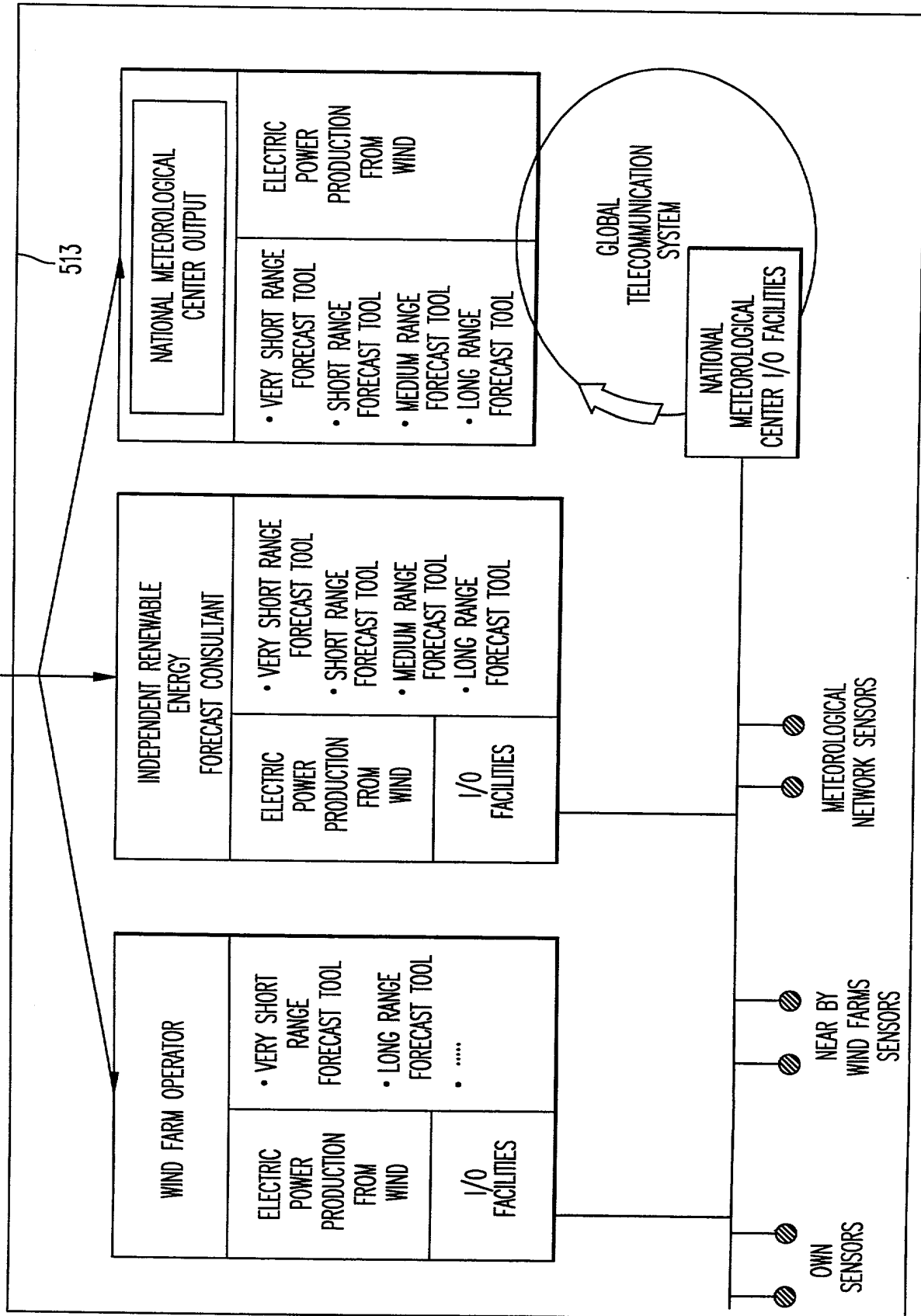


FIG. 36

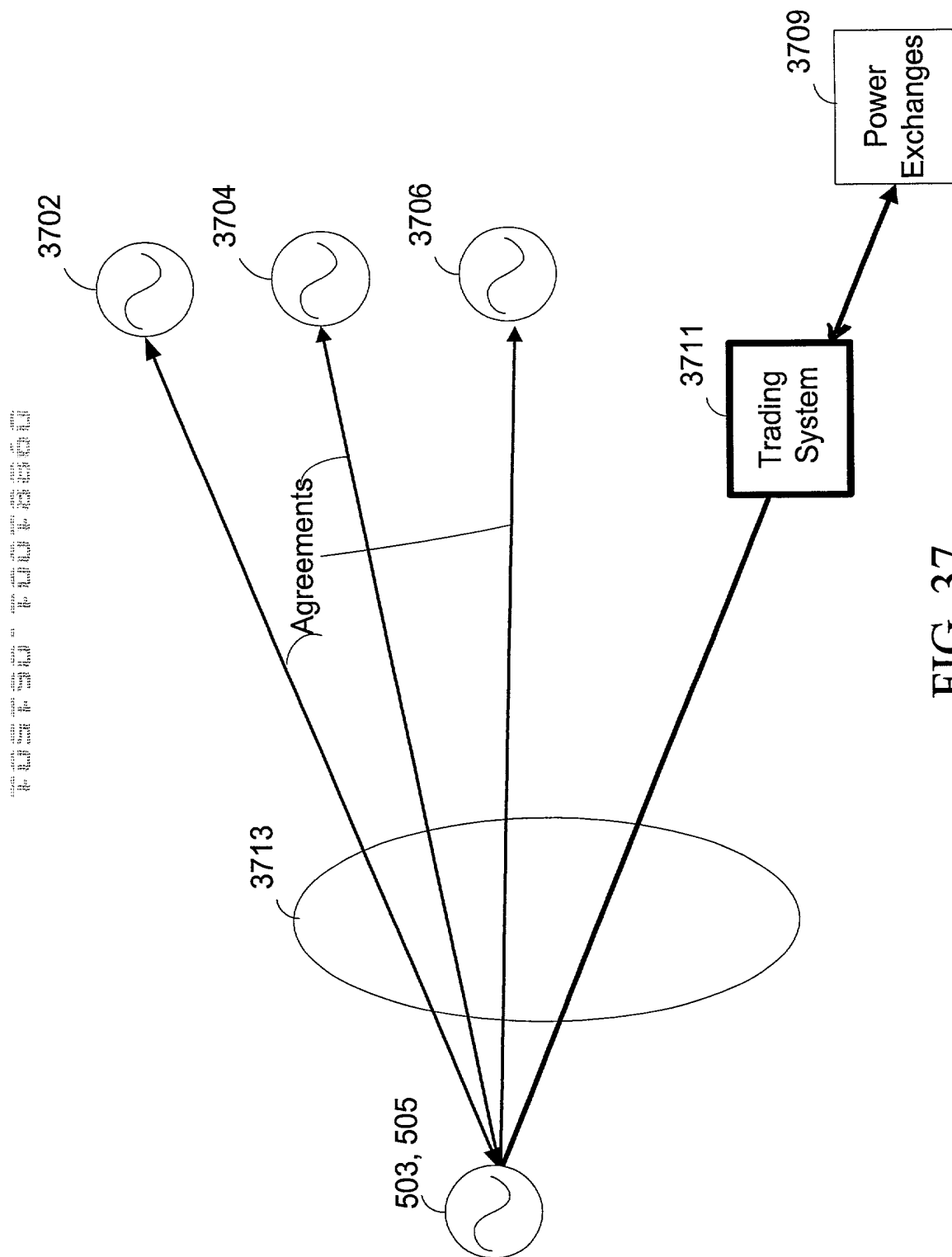
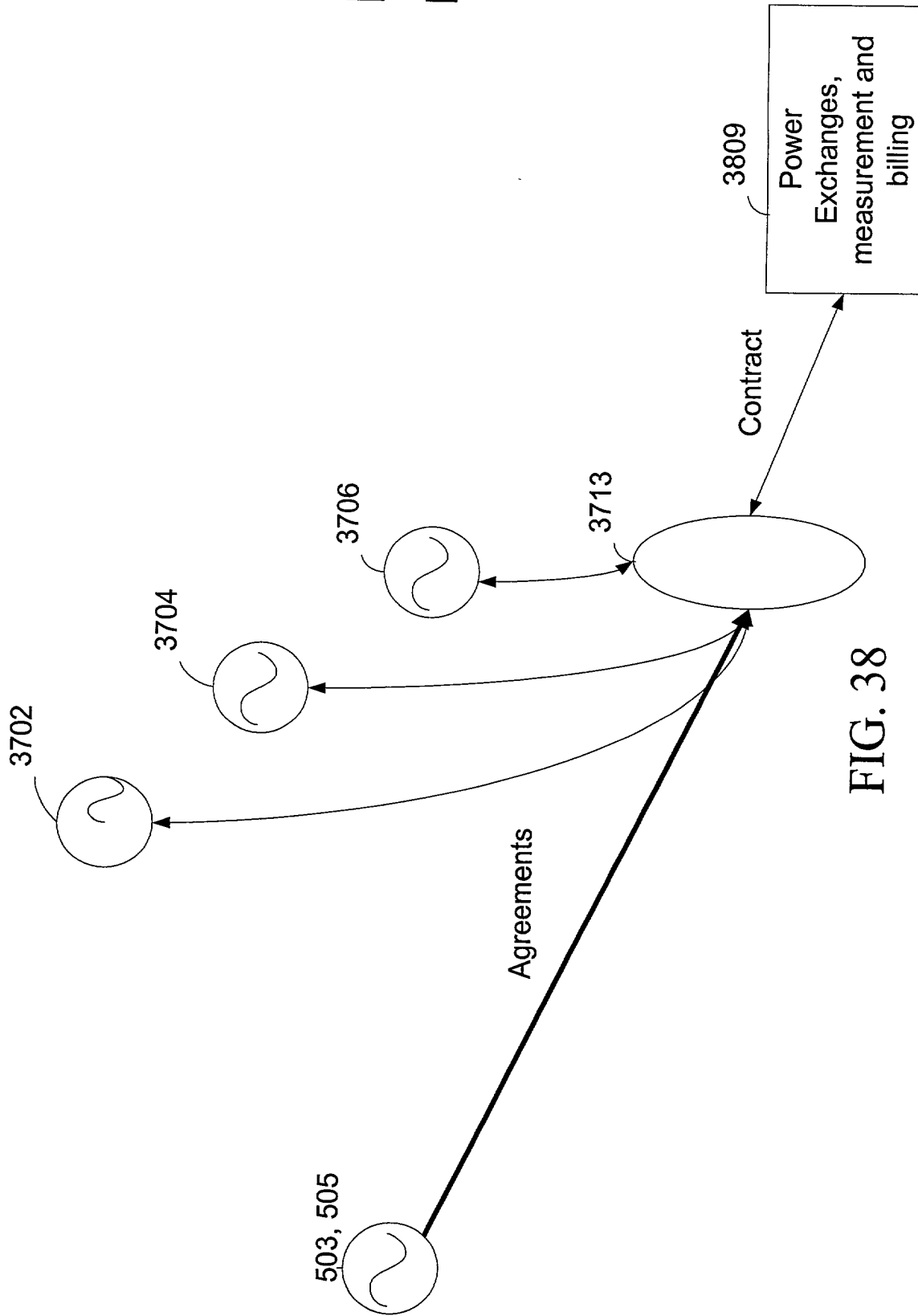


FIG. 37



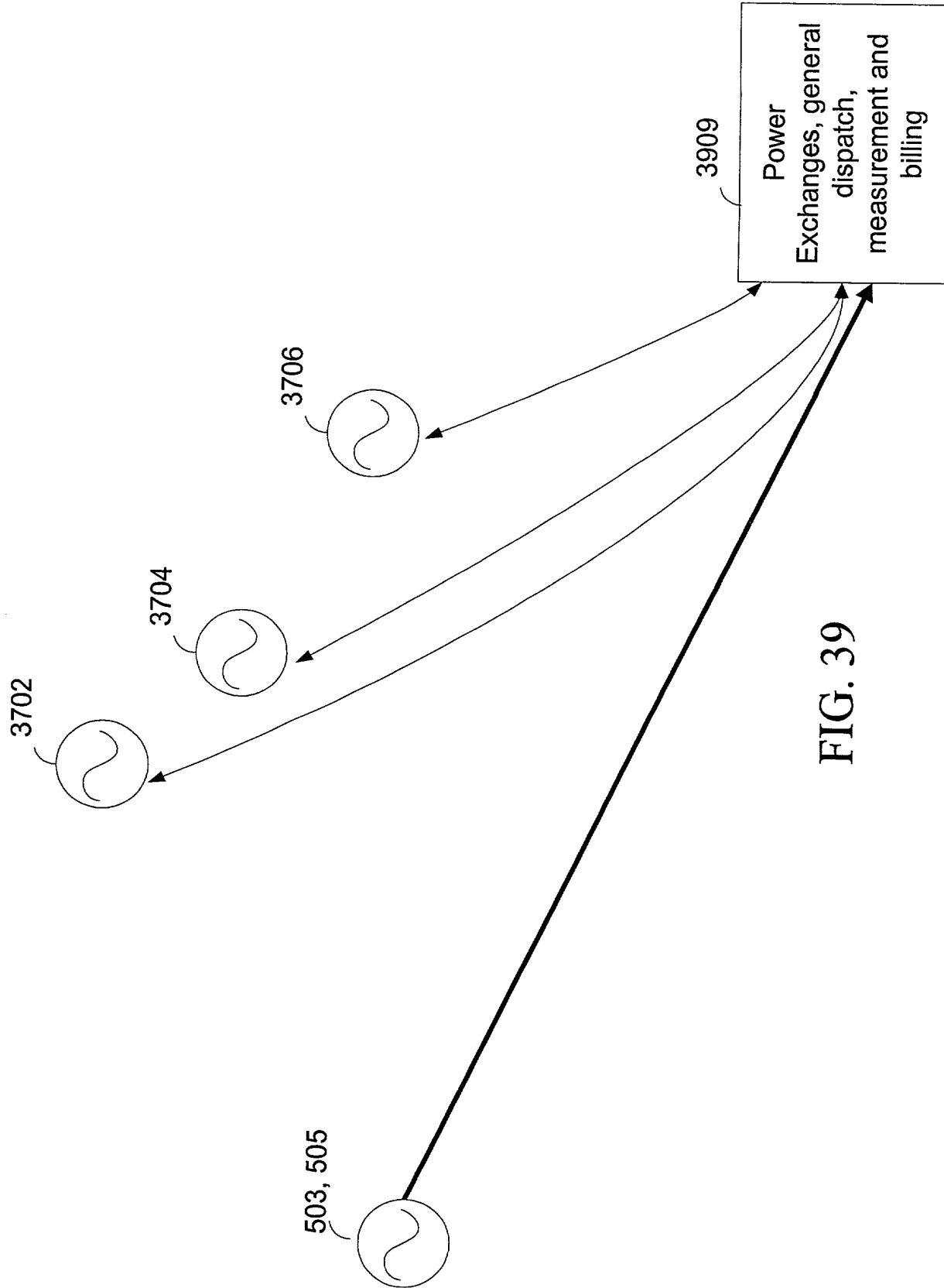


FIG. 39